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CITY OF BOSTON

REQUEST FOR PROPOSALS FOR A WASTE DISPOSAL SERVICE SYSTEM

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Boston

Raymond L. Flynn, Mayor

February 15, 1985

To Recipients of the City of Boston
Request for Proposals for a Waste
Disposal Service System

The submission date for proposals in response to this Request for Proposals (RFP) is April 16, 1985. Thirty copies of the Business and Technical Proposal Volumes must be submitted to:

Mr. Joseph F. Casazza
Commissioner of Public Works
City of Boston
City Hall, Room 714
Boston, Massachusetts 02201

Proposals received after 4:00 P.M., Boston time will not be considered by the City. The only acceptable evidence of receipt is a signed receipt form from the Department of Public Works.

Any questions regarding this RFP must be submitted in writing by close of business, March 4, 1985, to Mr. Casazza at the above address. All recipients of this RFP will receive written responses to any questions submitted.

Proposers are advised that there is a bid bond requirement specified in subsection 2.4.4 (5) of this RFP.

There will be no modifications to the terms and conditions contained in this RFP, unless recipients of this RFP are informed otherwise by the City in writing.

Very truly yours,

JOSEPH F. CASAZZA
Commissioner of Public Works

JFC/jc

DEPARTMENT OF PUBLIC WORKS / Boston City Hall/City Hall Plaza 02201
Joseph F. Casazza, Commissioner, 725-4900
Robert P. Mehegan, Executive Secretary 725-4901

CITY OF BOSTON

REQUEST FOR PROPOSALS
FOR A WASTE DISPOSAL SERVICE SYSTEM

15 February 1985

Raymond L. Flynn, Mayor
City of Boston

Joseph F. Casazza
Commissioner of Public Works

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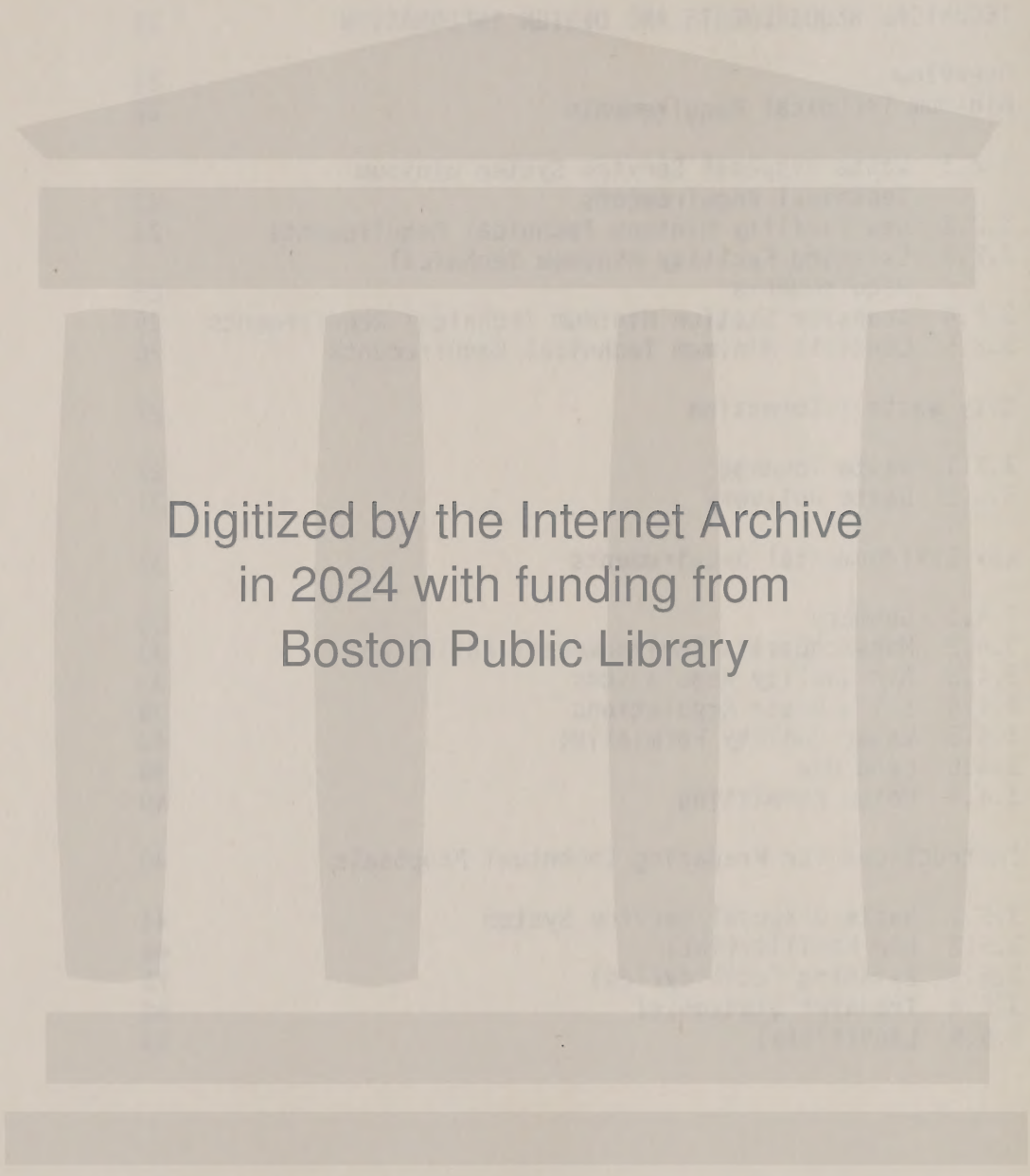

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GLOSSARY OF TERMS (SELECTED)

CITY WASTE	All of the City's municipally collected solid waste form its 11 collection districts.
DISPOSAL CAPACITY	The combination of waste processing capacity at the Facility(ies) and landfill capacity at the Landfill(s) for both residue and bypassed waste included in the Proposer's System.
EXISTING FACILITY	A waste-to-energy facility for which all environmental permits to construct have been issued and which is now, or will be by December 31, 1985, in commercial operation.
FACILITY(IES)	New or existing waste-to-energy facility or facilities designated by the Proposer as a component of its Waste Disposal Service System.
LANDFILL(S)	The landfill or landfills designated by the Proposer as a component of its Waste Disposal Service System.
NEW FACILITY	A waste-to-energy facility planned or under construction, or a facility producing refuse-derived fuel for off-site sale, or a modification of an existing facility through the addition of one or more processing lines, which will not be in commercial operation until after December 31, 1985.
POINTS(S) OF DELIVERY	The Facility(ies), Landfill(s), or, if proposed, Transfer Station(s) in the Proposer's System to which City Waste is to be delivered for the term of service.
SERVICE FEE	Fixed per-ton fee paid by the City for each ton of City Waste it delivers to the Point(s) of Delivery.
SERVICE DATE	Date certain on which the Proposer guarantees to commence disposal service to the City.

GLOSSARY OF TERMS (SELECTED)
(continued)

TRANSFER STATION(S)	A transfer station or transfer stations, either within or outside the City, designated at the option of the Proposer as a component of its Waste Disposal Service System.
WASTE DISPOSAL SERVICE SYSTEM (SYSTEM)	The Proposer's overall system for disposal of City Waste, including Facility(ies) and/or Landfill(s) and, at the Proposer's option, Transfer Station(s).

1. OVERVIEW

1.1 PURPOSE OF SOLICITATION

The City of Boston (City) seeks Proposals from companies to provide 20-year disposal service for the City's municipally collected solid waste (City Waste) from its 11 collection districts. This Request for Proposals (RFP) is limited to Proposers who can offer the City Disposal Capacity at locations outside of the City. The Disposal Capacity can include any combination of new or existing waste-to-energy facility(ies) [Facility(ies)] and/or landfill(s) [Landfill(s)] that is sufficient to provide at least 20 years of disposal capacity for City Waste.

The Proposer's technology must be demonstrated to be commercially proven, based on the experience of the Proposer, or members of the Proposer's team, with a facility of comparable throughput capacity, currently in operation.

The City recognizes that the location of a Proposer's Disposal Capacity might entail transport by the City of its waste for substantial distances from the end point of the City collection routes unless transfer station service is provided. Accordingly, the City encourages the Proposer to include a transfer station(s) [Transfer Station(s)] in its Waste Disposal Service System (System) in situations where the haul distance to its Disposal Capacity would have a significant impact on the reliability and cost of the City's collection service. The Transfer Station(s) may be located within or outside of Boston. However, the City will not provide a City-owned site for transfer.

In summary, Proposers responding to this RFP must offer the City a System which identifies the location and capacity of Facility(ies) and/or Landfill(s) sufficient to provide 20 years of Disposal Capacity for City Waste, and which may include, at the Proposer's option, a Transfer Station(s). The Proposer will specify the Point(s) of Delivery in its System to which the City Waste is to be delivered.

The City will evaluate Proposals received in response to this RFP and compare these to its other long-term waste disposal option, which is the development of a waste-to-energy facility at the site of the City's South Bay incinerator. The City is in receipt of a proposal from a developer who is prepared to design, build, own, and operate such a facility; provide the backup landfill; and enter into a 20-year waste disposal service agreement with the City. The City will negotiate a waste disposal Service Agreement with the Proposer who is most responsive to this RFP or the developer of the South Bay facility, based on its evaluation of the offer deemed by the City to be in its overall best interest.

1.2 RFP ORGANIZATION

Section 2 of this RFP, Business and Financing Arrangements, delineates the City's waste disposal Service Agreement requirements, the Proposer's responsibilities related to providing a System to the City, and instructions for submitting a Business Proposal. Section 3 of this RFP, Technical Requirements, delineates the minimum technical requirements that apply to the various components of the Proposer's System; presents information on the City's collection system and quantities of City Waste disposed of in prior years; provides background information on environmental requirements; and provides intructions on preparing a Technical Proposal.

1.3 PROPOSAL SUBMISSION DEADLINE

Proposals responding to this RFP must be submitted by April 16, 1985, 4:00 p.m., local time. Proposals must be submitted to:

Mr. Joseph Casazza
Commissioner of Public Works
City of Boston
City Hall, Room 714
Boston, Massachusetts

Any Proposals received after 4:00 p.m. on April 16, 1985, will not be considered and will be returned to the Proposer. The only acceptable evidence of receipt is a signed receipt from the City Department of Public Works (DPW).

Proposals must be organized in two volumes: Volume I: Business Proposal; and Volume II: Technical Proposal. Thirty (30) copies of each volume are to be submitted. Each volume must be typed or printed (double spaced) on 8 1/2" x 11" size paper and paginated.

1.4 CITY'S RIGHTS AND OPTIONS

This RFP constitutes only an invitation to make proposals to the City. The City reserves, holds, and may in its sole discretion exercise any or all of the following rights and options with respect to this RFP:

1. To select and enter into a Service Agreement with either the Proposer who is most responsive to the RFP or with the developer of a waste-to-energy facility at the South Bay site whose proposal best satisfies the interests of the City, and not necessarily on the basis of price alone or any other single factor.

2. To reject any or all proposals.

3. To supplement, amend, or otherwise modify this RFP, and to cancel this RFP with or without the substitution of another RFP.

4. To issue additional subsequent solicitations for proposals, to conduct investigations with respect to the qualifications of each Proposer, and to hold public hearings with respect to the merits of each proposal.

5. To negotiate with Proposers for amendments or other modifications to their proposals.

6. To not enter into agreements as contemplated by this RFP.

1.5 EXPENSES OF PROPOSAL PREPARATION

Each proposal prepared in response to this RFP will be prepared at the cost and expense of the Proposer, and with the express understanding that there will be no claims whatsoever for reimbursement from the City for the cost or the expense of its preparation. Nor will there be any claims whatsoever for reimbursement from the City for any costs or expenses incurred by the Proposers, except as explicitly provided for in the Service Agreement.

1.6 CONFIDENTIAL INFORMATION

Proposals submitted in response to this RFP may contain technical or other data whose public disclosure would cause substantial injury to the Proposer's competitive position or constitute a trade secret. To protect these data from disclosure, the Proposer should specifically identify the pages of the proposal that contain such information by properly marking the appropriate pages and inserting the following notice in the front of its proposal:

NOTICE

> The data on pages ___ of this proposal, identified by an asterisk (*) or marked along the margin with a vertical line, contain information that is a trade secret and/or disclosure of which would cause substantial injury to the Proposer's competitive position. The Proposer requests that such data be used only for the evaluation of the proposal, but understands that disclosure will be limited to the extent that the City determines is proper. If a Service Agreement is awarded to this Proposer, the City will have the right to use or disclose the data as provided in the Service Agreement.

The City assumes no responsibility for disclosure or use of unmarked data for any purpose.

The City will make every effort to protect confidential data from disclosure, but will not be held liable for any damage or injury which may result from any disclosure that may occur.

2. BUSINESS AND FINANCING ARRANGEMENTS

2.1 WASTE DISPOSAL SERVICE AGREEMENT REQUIREMENTS

The City seeks to enter into a contract for long-term disposal of City Waste. Pursuant to the requirements of Section 2.4 of this RFP, Proposers will submit in their Proposals a Service Agreement in contract form. The Service Agreement must be consistent with the following policies, which stipulate the commitments the City will make, its service requirements, the structure of disposal fee payments, and limitations on the City's liability.

2.1.1 TERM OF SERVICE

The Proposer will guarantee to provide disposal service to the City commencing on a date certain (the Proposer's bid Service Date) and continuing thereafter for a term of at least 20 years. The City desires that service commence as soon as possible after June 30, 1986, which is the expiration date of its existing waste disposal contracts.

The Proposer shall bid the Service Date as a date certain. The Service Date is the date, a specified number of months after the date of execution of a Service Agreement between the City and the Proposer, on which the Proposer will commence providing disposal service to the City.

Non-performance by the Proposer (e.g., failure to have the System in service by the Service Date due to delays in construction) will not relieve the Proposer of an obligation to commence disposal service to the City on the Service Date or, alternatively, to reimburse the City for any costs in excess of the Proposer's Service Fee that the City incurs directly in providing for waste disposal because of the Proposer's non-performance.

2.1.2 WASTE SUPPLY

The City will deliver for disposal all City Waste to the Point(s) of Delivery specified by the Proposer, and the Proposer will be responsible for accepting and disposing of all such delivered City Waste. The City has disposed of between approximately 210,000 and 220,000 tons per year (TPY) of City Waste during the last three years. In addition, the City has recently assumed responsibility for arranging disposal of Boston Housing Authority (BHA) waste, which is estimated to represent an additional 20,000 TPY. The Proposer will, therefore, provide Disposal Capacity for approximately 240,000 TPY of City Waste.

City Waste will be delivered in collection vehicles (packer trucks) to the Point(s) of Delivery between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday. The City will, however, require that provisions be made for extending these hours during emergency conditions and to accommodate special collections.

2.1.3 CITY WASTE GUARANTEE

The City will guarantee to deliver all City Waste and to pay the per-ton Service Fee for 165,000 TPY or actual City Waste delivered, whichever is greater. The City's Service Fee will not be subject to adjustment for an energy revenue makeup if less than 165,000 TPY are delivered.

The City will not make put-or-pay waste delivery guarantees on other than an annual basis (i.e., weekly or monthly delivery guarantees are not acceptable).

2.1.4 PAYMENT OF SERVICE FEE

The City will pay a fixed per-ton Service Fee (based upon the Proposer's bid) for each ton of City Waste it delivers to the Point(s) of Delivery. The Service Fee will be subject to adjustment at the end of each 12-month period following July 1, 1985, based upon the Proposer's bid Service Fee Adjustment Factor and the rate of change during the prior 12 months of the Consumer Price Index for All Urban Consumers (CPI-U) published for the City. The Service Fee will take into account all costs borne by the Proposer related to disposal of City Waste, including, but not limited to, all costs related to the financing (including payment of debt service), construction, operation, and maintenance of the Proposer's Facility(ies); all costs related to the financing (including payment of debt service), construction, operation, and maintenance of Transfer Station(s) (if included in Proposer's bid) and transfer-related haul costs; the cost of landfilling process residues and any unprocessed City Waste; all costs associated with selling energy or refuse-derived fuel (RDF) to the market(s) that are attributable to the Facility(ies); and all federal and State taxes and local property taxes or payments in lieu of property taxes incurred by the Proposer. Additionally, if the Proposer will utilize a Facility(ies) as part of its System, the Proposer will make its own determination as to whether installation of acid gas control equipment is or will be required and, accordingly, either base its Service Fee to the City on the cost of installing and operating this equipment, or, alternatively, guarantee that the City's Service Fee will not be subject to adjustment for future installation of acid gas control equipment.

2.1.5 ADJUSTMENTS IN THE SERVICE FEE

The City's Service Fee will be subject to adjustments only to reimburse the Proposer for increased costs it incurs in providing disposal service to the City as a result of the following limited circumstances:

- Changes in federal or State environmental laws or regulations from those in effect on the Proposal submission date which require modifications in System design, equipment, or operations and which affect facility capital or operating costs (except for the installation of acid gas control equipment).

- Changes in the interest rates on any debt issued to finance the Proposer's System from the interest rate assumed in the Proposer's bid to the City.

- The occurance of a limited uncontrollable circumstance which affects the Proposer's cost of providing disposal service to the City.

Any such adjustments made will be based on the City's prorata utilization of the Proposer's System.

2.1.6 LIMITATIONS ON CITY LIABILITIES

Under the terms of the Service Agreement, the City will not be liable to the Proposer or any other party for: (a) consequential damages to the Proposer of any type, including energy revenue losses for any reason; (b) payment of debt service on any outstanding bonds or other instruments used to finance components of the System; (c) changes in the composition or energy content of City Waste; and (d) changes in federal, State, or local tax laws.

2.2 PROPOSER RESPONSIBILITIES

2.2.1 DISPOSAL SERVICE TO THE CITY

Commencing on a date certain (the Proposer's bid Service Date) the Proposer will accept delivery of all City Waste for a term of service of at least 20 years. Delivery of City Waste will be made to the Point(s) of Delivery designated by the Proposer in its Proposal. This Point(s) of Delivery may be a Transfer Station(s) within or outside the City (if the Proposer offers transfer service to the City), or a New or Existing waste-to-energy Facility(ies), or a Landfill(s). If the Proposer offers more than one Point of Delivery, the Proposer must specify the City Collection Districts that are to

be assigned to each Point(s) of Delivery. The Proposer is not relieved of its obligation to accept City Waste at the Point of Delivery except for the occurrence of limited uncontrollable circumstances or a change-in-law event that prevents the Proposer from providing service to the City. In the event that the Proposer, for any other reason, requires delivery of City Waste at locations other than the Point(s) of Delivery specified, the City will have the right to recover from the Proposer any incremental cost it incurs in redirecting its collection trucks to these locations.

Proposers may provide a transfer station within the City as a Point of Delivery. Proposers are advised that transfer station sites within the City that are new or that involve major modification of existing transfer stations and, therefore, are subject to site assignment review will be subject to City approval as to acceptability. Proposers who do not offer an in-City transfer station are advised that the City, in evaluating their Proposals, will adjust their bid Service Fee by its estimate of the increased or decreased cost of collection the City will incur in delivering City Waste to the Proposer's Point(s) of Delivery.

The Proposer is solely responsible for arranging for landfilling of process residues, unprocessible City Waste (e.g., oversized bulky waste), and City Waste not processed because of equipment outage at its Facility(ies).

The Proposer must provide the City with evidence that its Disposal Capacity is adequate for the City's requirements for 20 years. This will entail documenting the availability of the Facility(ies) to process both City Waste and waste from other suppliers under firm delivery (i.e., non-interruptible) contracts to the Proposer at the Facility(ies). Additionally, the Proposer must document that its Landfill capacity is adequate to meet its disposal requirements for residue and unprocessed waste, taking into account waste from all suppliers under firm contract to the Proposer and the available waste processing capacity at its Facility(ies). The Proposer must also disclose any contract commitments to existing waste suppliers that would or may affect the price or availability of service to the City.

2.2.2 FACILITY DESIGN, CONSTRUCTION, AND OPERATION

The Proposer will be responsible for the design, construction, startup, acceptance testing, and operation of the Facility(ies) that is part of its System. The Proposer will receive revenues from disposal and the sale of energy and materials and will pay all costs associated with the Facility(ies), including, but not limited to, debt service on any bonds issued and all applicable local property, State, and federal taxes.

2.2.3 TRANSFER STATION

If a Transfer Station(s) is provided as part of the Proposer's System, the Proposer must submit in its Proposal to the City evidence that it has secured access to the Transfer Station(s) for the term of service through direct ownership, option to purchase or lease, or a long-term operating contract with the existing owner. The Proposer will be responsible for all costs related to financing, construction, and operation of its Transfer Station(s).

2.2.4 LANDFILL

The Proposer must provide in its Proposal evidence to the City that it has secured sufficient Landfill capacity to meet the requirements for disposal of residues and bypassed waste related to processing both City Waste and waste from other firm contract suppliers at the Proposer's Facility(ies). The Proposer must show that there is sufficient permitted capacity at the Landfill(s) in the Proposer's System to meet these requirements, and, if the Landfill(s) is not owned by the Proposer, that the Proposer has a capacity reservation with the Landfill owner(s) to meet these requirements. The Proposer is responsible for all costs related to utilization of the Landfill(s) for disposal.

2.2.5 ARRANGEMENTS FOR AN ENERGY OR FUEL MARKET(S)

Under the project structure proposed by the City, it is the Proposer's responsibility to make contractual arrangements for the sale of energy or RDF produced by the Facility(ies). These arrangements will provide for an energy or fuel sales contract(s) with sufficient security to protect the integrity of the City's Service Fee. In making the contractual arrangements with the energy or fuel market(s), the Proposer must understand that: (1) under the City's waste disposal Service Agreement with the Proposer, the City will be held harmless of all liability resulting from nonperformance (including termination) by all parties to the energy or fuel sales contract(s); and (2) fluctuations in revenues from the sale of energy or fuel over the term of the Service Agreement will not be a basis for adjustment of the City's Service Fee.

If the Proposer is electing to sell RDF for off-site consumption, the Proposer must supply the following information:

- Pricing formula.
- The term of the agreement.

- The form of the annual minimum purchase guarantee to be made.
- The technical standards for minimum product quality, size, quantity, and delivery requirements.
- Whether the product will be burned in a dedicated furnace/boiler or cofired with a fossil fuel.
- The results of test burns if the product is to be cofired with a fossil fuel.
- Any required modifications/additions at the buyer's facility.
- The entity(ies) responsible for any required modifications/additions at the buyer's facility.
- Disposal arrangements for the residue produced in cofiring with a fossil fuel.

2.3 FINANCING REQUIREMENTS

2.3.1 PRIVATE OWNERSHIP

The City will have no ownership interest in any of the Facility(ies), Landfill(s), or Transfer Station(s) that are part of the Proposer's System, nor will the City be party to the Proposer's arrangement for equity from any source. If the Proposer's Facility(ies), Landfill(s), and/or Transfer Station(s) are privately owned to enable realization of the tax benefits of private ownership, the City will not participate in any arrangement requiring that it indemnify the owner against the potential loss of any tax benefits for any reasons, including change in law.

2.3.2 FINANCIAL GUARANTEES AND PROPOSER'S FINANCIAL CAPACITY

To the extent that a Proposer's System entails financing of a new Facility(ies), Landfill(s), or Transfer Station(s), the Proposer will have primary responsibility, subject to City approval, for structuring the financing arrangements for sale of any required debt; obtaining any required equity; the completion of the proposed system; and repayment of debt. The City reserves the right to approve the terms and structure of the financing.

The City will enter into a waste supply agreement in which its credit support to any financing will be limited to a put-or-pay guarantee on waste supply. That is, the City will make no direct guarantees to

repay debt under any circumstances. The City's sole responsibility will be to deliver all City Waste and to pay the Service Fee on the guaranteed amount (165,000 TPY) or actual delivered City Waste, whichever is greater.

The Proposer must establish to the satisfaction of the City that it has the financial capacity to make the guarantees that may be attendent to financing and operating its System. The City will evaluate the Proposer's financial capacity to obtain an A rating on any debt that it will issue; to assume unlimited liability to complete construction, or to make other equivalent guarantees to assure completion of construction; and to make appropriate guarantees during operations to assure performance of its service obligations and repayment of debt and any other financial obligations attendent to the Proposer's System.

2.3.3 CHANGES IN INDUSTRIAL DEVELOPMENT BOND INTEREST RATES

To the extent that the Proposer intends to finance a new Facility(ies), Landfill(s), or Transfer Station(s) through the issuance of tax-exempt or taxable Industrial Development Bonds (IDBs), the Proposer must stipulate to the City whether its Service Fee will change due to changes in interest rates between the time of its bid and the time that permanent financing is obtained. If the City's Service Fee will be subject to change, then the Proposer's base bid Service Fee must assume an average 10 percent interest rate and stipulate the dollar-per-ton change in the Service Fee that will occur per percentage point change in the average bond interest rate at financing.

To the extent that a Proposer requires private activity bond allocation to facilitate issuance of tax-exempt debt, the City will support the Proposer's application to the Massachusetts Industrial Finance Agency to obtain such allocation.

2.3.4 VARIABLE RATE DEMAND BOND FINANCING

To the extent that the Proposer intends to finance a new Facility(ies), Landfill(s), or Transfer Station(s) through the issuance of debt, the Proposer has the option of using tax-exempt variable rate demand bond financing. The Proposer will stipulate whether it intends to use tax-exempt variable rate demand bond financing. If the Proposer does intend to do so, the Proposer will base its optional bid Service Fee on an assumed 7-percent interest rate and will stipulate whether the benefits of reduced interest costs will be shared with the City and the terms under which that sharing will occur, specifying the City's liability for accepting interest rate increases that may occur.

2.4 BUSINESS PROPOSAL INSTRUCTIONS

The Business Proposal is to consist of four parts: a Business and Price Proposal Letter, a Waste Disposal Service Agreement, a Financing Plan, and Financial Capacity Information. Instructions on the contents of each of these items are provided below, followed by Business Proposal Forms A, B, and C.

2.4.1 BUSINESS AND PRICE PROPOSAL LETTER

The Proposer must submit a Business and Price Proposal Cover Letter substantially in the form and content shown in Business Proposal Form A. Proposers should note that the Business and Price Proposal Cover Letter must contain a base bid Service Fee. If the Proposer chooses to use tax-exempt variable rate bond financing, an optional bid Service Fee will also be included

The Letter must be signed by the Chief Executive Officer and Chief Financial Officer of the proposing company. If the company is a joint venture, the Letter must be signed by the Chief Executives of the joint venture companies.

If the proposing company is a subsidiary of another company, the Chief Executive of the parent company must be a signatory. Proposers must complete paragraph 1, with regard to arrangements for Transfer Station(s) and arrangements for Landfill(s), in sufficient detail to meet the requirements of Section 2.3 of this RFP.

2.4.2 WASTE DISPOSAL SERVICE AGREEMENT

Proposers must submit a Waste Disposal Service Agreement which the Proposer is prepared to sign with the City and which is responsive to the requirements and policies stipulated in Sections 2.1, 2.2, and 2.3 of this RFP. The Agreement must be complete.

2.4.3 FINANCING PLAN

To the extent that the Proposer's System requires financing of Facility(ies), Landfill(s), or Transfer Station(s), the Proposer will submit a detailed narrative discussion of its financing plan, including the provision of equity investment for private ownership. The financing plan will discuss the implications of the two financing alternatives (i.e., long-term IDBs and variable rate demand bonds, if the Proposer intends to use variable rate financing). The Proposer will specifically comment on the changes that would be made in the financing plan under either alternative.

The discussion of the financing structure will describe the Proposer's assumptions regarding the credit arrangements with other project participants that will be required to support the financing in relation to the credit commitments that the Proposer will make. The interrelationship among the various project contracts and the project financing must also be explained. The Proposer must specify the type of credit support to the financing required from other contracted waste supply sources in addition to the City's put-or-pay contract, and from energy sales contracts. A schedule and listing of activities leading to and including the closing of the financing must be provided.

The Proposer must describe in detail all sources of funds, including the mix of debt and equity that will be used to capitalize the System, and uses of funds. The economic and financing assumptions used by all Proposers in formulating the flow of funds will reflect the assumptions given in Business Proposal Form C. The method and timing of funds flowing from both equity sources and bond proceeds into the project must be described, as well as the expected drawdown of funds during construction. Any cash flows to the equity investor prior to the commercial operation of the System must also be identified.

2.4.4 FINANCIAL INFORMATION

The following information must be provided to document the financial capacity of the Proposer, the Proposer's parent company (if applicable), and, if the Proposer is a joint venture, each of the joint venture partners.

1. Audited financial statements for the past three fiscal years, to include, at a minimum, income statements, balance sheets, and statements of changes in financial position. (If less than three years of financial statements are available, this information should be provided to the fullest extent possible).

2. Copies of the most recent Form 10-K filed with the United States Securities and Exchange Commission (SEC) and all 10-Qs since the last 10-K; or, if a Form 10-K is not filed with the SEC, the following:

    a. Copies of the latest quarterly financial reports.

    b. A copy of the latest annual report, if any.

    c. Information on any material changes in the mode of conducting business, bankruptcy proceedings, and mergers or acquisitions within the past three years, including comparable information for

related firms and principals of firms. Any pending lawsuits that may affect the firm's ability to carry out this project must also be disclosed.

d. A list of the executive officers of the firm, positions held, and terms of office.

3. A copy of the Prospectus and/or Official Statement, if any, for the firm's latest security offerings.

4. The rating of all outstanding debt, if any has been rated.

5. The Proposer will obtain and submit to the City a bid bond for an amount equal to 100 percent of the value of the Service Agreement in the first year of System operations. The value of the Service Agreement in the first year of System operations will be calculated as the City's minimum tonnage guarantee (i.e., 165,000 TPY) times the Proposer's bid Service Fee. In lieu of obtaining a bid bond as described above, Proposers will obtain a bid bond for an amount equal to 10 percent of the estimated system capital cost.

6. If the Proposer is electing to produce RDF for sale to an off-site consumer, the Proposer must provide the following information regarding the fuel sale agreement: the pricing formula; the term of the agreement; the form of the annual minimum purchase guarantee to be made; and the technical standards for minimum product quality, size, quantity, and delivery requirements. If a fuel sale agreement has not been finalized, then the Proposer must submit a letter of intent signed by the Chief Executive Officer of the organization that is making the purchase commitment or an official certified to be duly authorized to enter into the type of contract proposed.

BUSINESS PROPOSAL FORM A

BUSINESS AND PRICE PROPOSAL COVER LETTER
(To be typed on Proposer's letterhead)

Mr. Joseph Casazza
Commissioner of Public Works
City of Boston
City Hall, Room 714
Boston, Massachusetts 02108

Dear Commissioner Casazza:

Herewith we are submitting our Business and Technical Proposals to the City. As delineated in our Proposal and as further delineated in our proposed Service Agreement, we are prepared to make the following commitments to the City.

1. The Waste Disposal Service System we propose will provide Disposal Capacity for City Waste for 20 years and includes the following: (Proposer shall identify the location of the Transfer Station(s), if offered, waste-to-energy Facility(ies), and Landfill(s) included in its system.)

   The total daily waste processing capacity of the waste-to-energy Facility(ies) included in our Proposal is _____ TPD. Taking into account 240,000 TPY of City Waste, the total annual tonnage of all waste which we are now committed to processing at this Facility(ies) under firm (i.e., non-interruptible) contracts is _____ TPY.

   The Landfill capacity dedicated to the disposal requirements of our System, taking into account our firm (non-interruptible) contracts with other waste suppliers is _____ (specify total cubic yards of remaining Landfill capacity).

   Our contracts with other waste suppliers do not include any terms which would affect the price or availability of service to the City as proposed. (If the Proposer is unable to make this statement, it will provide information on the terms of these other contracts which might affect its proposed price or availability of service to the City.)

   We will own and operate the Transfer Station(s) included in our Proposal.

   [If a Transfer Station(s) is offered which is not owned by the Proposer, the Proposer will describe the contract arrangement with the existing owner(s) and, at a minimum, submit a supporting letter of intent from the existing owner(s) subscribing to this arrangement.]

BUSINESS PROPOSAL FORM A (continued)

Our arrangements for securing access to the Transfer Station(s) for the term of service are _____

_____

_____

We will own and operate the Landfill(s) included in our Proposal.

[If the Landfill(s) is not owned by the Proposer, the Proposer will describe the arrangements existing or contemplated for securing access to the Landfill(s) for the term of service and provide supporting documentation indicating that the existing owner(s) subscribes to these arrangements.]

Our arrangement for securing access to the Landfill(s) is _____

_____

_____

2. Our enclosed Service Agreement is consistent with the requirements stipulated in Sections 2.1, 2.2, and 2.3 of the City's RFP, is complete, and is in a form we are ready to execute with the City.

3. Our Waste Disposal Service System (does/does not) entail financing of a New Facility(ies), Landfill(s), or Transfer Station(s) and the base bid Service Fee (will/will not) be subject to change based on the actual average bond interest rate at the time of financing.

   Our base bid Service Fee, fixed as of July 1985, is $___ per ton and will escalate on July 1 of each year thereafter at __ percent (the bid Service Fee Adjustment Factor) of the annual rate of change in the CPI-U for Boston.

   (If Service Fee is subject to change, Proposer must complete the following.)

   Our bid Service Fee assumes a 10-percent average bond interest rate and will be adjusted at the time of financing by $_____ per ton per percentage point change in the actual bond interest rate from the assumed average bond interest rate of 10 percent.

4. (If the Proposer chooses to use Variable Rate Demand Note Financing, then the Proposer will provide, in addition to the base bid Service Fee, an optional bid Service Fee and will include the following statement in the cover letter.)

   Assuming Variable Rate Demand Bond Financing at an interest rate of 7 percent, our optional bid Service Fee as of July 1985, is $___ per ton and will escalate on July 1 of each year thereafter at __ percent of the rate of change in the CPI-U for Boston.

BUSINESS PROPOSAL FORM A (continued)

The mechanism for adjusting the City's Service Fee due to changes in the Variable Rate during the term of service are as follows:__

_____

_____

(If the Proposer intends that the City's Service Fee should be adjusted to reflect changes in the Variable Rate, the mechanism for this change is to be specified.)

5. The contract escalation formula to be applied annually to adjust our Service Fee is as follows:

$$SF_t = SF_{t-1}[1 + SFA\ (CPI\text{-}U_t - CPI\text{-}U_{t-1})/CPI\text{-}U_{t-1}]$$

where:

SF — is the Service Fee

t — is the current year for which the annual adjustment is made

t-1 — is the immediately preceeding year

SFA — is the Service Fee Adjustment Factor bid by the Proposer

CPI-U — is the Consumer Price Index-All Urban Consumers for Boston

(If the Proposer's Service Agreement is based on a different escalator, that formula must be specified above).

6. Our bid Service Fee takes into account all of our costs related to financing, construction, and operation of our Waste Disposal Service System. We have made a determination that equipment for acid gas control (will/will not) be installed in our waste-to-energy Facility(ies). We agree that the City' Service Fee will not be subject to adjustment for future installation of this equipment.

7. Our financing plan, which is enclosed, recognizes that any credit support required of the City will be limited to its put-or-pay waste commitment and that the City will have no liability for repayment of debt related to the financing of our Facility(ies), Landfill(s), or Transfer Station(s). Furthermore, we require no indemnification of Service Fee adjustments from the City due to changes in federal and State tax law or increases in local property taxes.

BUSINESS PROPOSAL FORM A (continued)

8. If the Proposer's Waste Disposal Service System requires the issuance of debt to finance the expansion of any existing System component(s) [i.e., Facility(ies), Landfill(s), or Transfer Station(s)], the Proposer must provide a detailed description of the financing covenants securing any oustanding debt on the System component(s) to be expanded.

9. [If the Proposer's Facility(ies) will produce RDF for sale to an off-site consumer, the Proposer must provide the following:]

   We have enclosed information regarding our proposed fuel sale agreement, including the pricing formula; the term of the agreement; the form of the annual minimum purchase guarantee to be made; and the technical standards for minimum product quality, size, quantity, and delivery requirements. This information is provided in the form of a draft fuel sale contract with a supporting letter of intent signed by the organization that is making the pruchase commitment.

10. We will commence service under the terms of our Service Agreement no later than the first day of the ___ (number of months) month after the execution of the Service Agreement (the Proposer's bid Service Date).

11. A copy of our bid bond, pursuant to the requirements of subsection 2.4.4(5) of the City's RFP, is enclosed.

All other promises and representations made to the City are as stated in our Proposal.

Sincerely

_____
Name/Title (Chief Executive Officer of Proposing Company)

Approved:

_____
Name/Title (Chief Executive Officer of Parent Company)

BUSINESS PROPOSAL FORM B

SOURCES AND USES OF FINANCING

SOURCES

Long-Term Debt	$_____
Equity Investment	_____
Investment Earnings	_____
TOTAL	$_____

USES

Design	$_____
Construction:	
• Buildings	_____
• Equipment	_____
• Other	_____
Debt Issuance Expense	_____
Equity Placement Expense	_____
Capitalized Interest	_____
Reserve Fund Requirements	_____
TOTAL	$_____

BUSINESS PROPOSAL FORM C

ECONOMIC AND FINANCING ASSUMPTIONS

ECONOMIC

General Price Inflation Rate:	_____
Construction Price Inflation Rate:	_____

LONG-TERM DEBT

Date of Financing:	No later than December 31, 1985
Bond Coupon Rate:	10%/year (7%/year for variable rate financing)*
Principal Amortization Period:	20 years*
Annual Debt Service Payments:	Level*
Reserve Fund Level:	Equal to the annual debt service payment (no reserve fund for variable rate financing)*
Reinvestment Rate on Capitalized Interest, Construction, and Reserve Funds:	No arbitrage*
Issuance Fees:	3.5% of total bond issue (2.5% for variable rate financing)*
Design through Scheduled Service Date:	_____ Months
Capitalized Interest Period:	_____ Months
Annual Debt Service Payments:	_____/Year
Drawdown Schedule During Construction for all Funds on Month Basis:	Provide as Attachment

EQUITY

Date of Equity Placement:	_____
Schedule of Equity Flow into Project on Monthly Basis:	Provide as Attachment

_____

* Indicates common assumptions to be made by all Proposers.

3. TECHNICAL REQUIREMENTS AND DESIGN INFORMATION

3.1 OVERVIEW

This RFP requires that the Proposer offer the City a Waste Disposal Service System which, at a minimum, has sufficient Disposal Capacity to provide for disposal of City Waste for a term of 20 years. The Proposer's Disposal Capacity can include any combination of Facility(ies) and Landfill(s) which together will provide sufficient capacity for waste processing and incineration and landfill disposal of residues and unprocessed waste that is adequate to meet both the requirements for disposal of 240,000 TPY of City Waste and the disposal requirements of any other waste suppliers who have firm (i.e., non-interruptible) contracts to utilize the Proposer's Disposal Capacity. The Proposer's System may include, at the Proposer's option, a Transfer Station(s) to minimize the impact on the cost and reliability of the City's collection system of hauling City Waste substantial distances from the end point of City collection routes to the Proposer's Facility or Landfill. If a Proposer's System will entail delivery of City Waste to multiple Points of Delivery (e.g., delivery of a portion of City Waste in collection vehicles to a Facility and delivery of a portion of City Waste to the Proposer's Transfer Station), the Proposer will specify the City Collection Districts that are to be assigned to each Point of Delivery.

Section 3 of this RFP includes the following.

1. The minimum technical requirements for design and operation are set forth in Section 3.2. In subsection 3.2.1., minimum technical requirements are specified for the System as a whole. Minimum technical requirements are also specified for each component of the System. Accordingly, subsection 3.1.2 specifies New Facility minimum technical requirements; subsection 3.2.3 specifies Existing Facility minimum technical requirements; subsection 3.2.4 specifies Transfer Station minimum technical requirements; and subsection 3.2.5 specifies Landfill minimum technical requirements.

2. Section 3.3 provides information on City Waste.

3. Section 3.4 provides information on key environmental requirements that are applicable to the various components of a Proposer's System.

4. Section 3.5 provides instructions to Proposers for preparing Technical Proposals. These instructions are specific to each component of a System that may be offered by a Proposer (i.e., New Facility, Existing Facility, Transfer Station, and Landfill) and are to be followed by each Proposer, as appropriate, in preparing its Technical Proposal.

3.2 MINIMUM TECHNICAL REQUIREMENTS

The following presents minimum requirements for design and operation of a Proposer's System and its various components.

3.2.1 WASTE DISPOSAL SERVICE SYSTEM MINIMUM TECHNICAL REQUIREMENTS

1. At a minimum, the System must include a Facility(ies) and/or Landfill(s) with sufficient Disposal Capacity to meet the disposal requirements for both 240,000 TPY of City Waste and waste from other suppliers under firm contract with the Proposer to utilize its Disposal Capacity. The Proposer must demonstrate that its Landfill capacity takes into account requirements for disposal of firm contract waste that cannot be processed due to unavailability of the Facility as a result of unscheduled and planned outages.

2. The Proposer must show that, pursuant to the requirements of Massachusetts General Law Chapter 111, valid site assignments are in effect for each component of the Proposer's System. Or, absent an approved site assignment, the Proposer must present convincing evidence that approval from the local Board of Health can be obtained.

3. The Proposer's System shall take into account utilization of Transfer Station(s) to minimize the impact on the cost and reliability of the City's collection system of hauling City Waste substantial distances from the end point of City collection routes to the Proposer's Facility(ies) or Landfill(s).

4. The Proposer will specify the Point(s) of Delivery in its System at which City Waste is to be delivered in collection vehicles for the 20-year term of service. If a Proposer specifies multiple Points of Delivery, the Proposer will also specify the City Collection Districts that are to be assigned to each Point of Delivery for the term of service.

5. The Point(s) of Delivery will be designed to minimize traffic impacts and to facilitate access and minimum turnaround time for City collection vehicles, taking into account the arrival patterns of other waste delivery vehicles at these points.

3.2.2 NEW FACILITY MINIMUM TECHNICAL REQUIREMENTS

The technical requirements for a New Facility follow:

1. The Proposer or member of the Proposer's team must use technology that has been proven in commercial operation. If mass-burn or RDF/dedicated furnace/boilers are utilized, the Proposer, or members of the Proposer's team, must have previously designed and built a furnace/boiler unit for the combustion of waste fuels having a heat release rate* equal to at least 75 percent of the heat release rate of the unit size planned for the project.

2. The New Facility must be sized or have sufficient excess capacity to be at least capable of processing City Waste at a minimum HHV of 5,200 Btu/lb.

3. If mass-burning or RDF/dedicated boilers technology is to be used, the New Facility must include at least two but no more than four furnaces/boilers.

4. If a prepared-fuel/dedicated boilers system is proposed, or if RDF is to be produced for sale to an off-site consumer, the New Facility must include at least two processing lines, each capable of processing 100 percent of the waste. The capacity of the proposed processing line in tons per hour (TPH) shall be no greater than 125 percent of the largest processing line previously designed and built by the Proposer or a member of the Proposer's team.

5. The New Facility must be designed to minimize traffic impacts at the site, to facilitate City delivery vehicle access, and to minimize delivery City vehicle turnaround times.

---

* Heat release rate (in millions of Btu/hour) is defined as the tons of fuel burned per hour multiplied by the higher heating value of the fuel in millions of Btu/ton.

6. In selecting the cooling tower design (if a cooling tower is required or added to an existing Facility), due consideration must be given to minimizing drift and preventing fogging and icing problems on surrounding highways and thoroughfares.

7. In stack height design, due regard must be given to proximity to local airports and to Federal Aviation Administration restrictions.

8. The New Facility must include waste storage and transfer capability sufficient to assure that the Facility can process waste at its rated capacity.

9. The New Facility must be designed and constructed to comply with all applicable industrial codes, and all applicable code requirements of the American Society of Mechanical Engineers and other technical societies, either as stated or standard in industrial practice; and constructed and operated in compliance with all applicable federal, State, and local environmental permits; with all applicable Occupational Safety and Health Administration requirements; good engineering practice (GEP); and federal, State, and local laws and regulations. Fire protection systems must be provided in accordance with National Fire Protection Association codes, insurance underwriter requirements, GEP, and all local codes.

10. If the Proposer is producing RDF for sale to an off-site consumer, the Proposer must supply sufficient information to prove he has established detailed specifications and provisions with respect to the fuel purchase regarding:

    - Acceptable fuel specification.
    - Required modifications/additions to the fuel buyer's existing facility.
    - Fuel storage and residue (ash) storage and disposal requirements.
    - Additionally, if RDF will be cofired with fossil fuel in an existing furnace/boiler(s) at the RDF buyer's facility, documentation of test burns or actual operating data on cofiring must be supplied.
    - Environmental permitability.

3.2.3 EXISTING FACILITY MINIMUM TECHNICAL REQUIREMENTS

The technical requirements for an Existing Facility follow:

1. The Existing Facility must be capable of processing the amount of City Waste allocated in conjunction with other waste under firm contract (non-interruptible) from other suppliers, taking into account that the waste may have a higher heating value of up to 5,200 Btu/lb.

2. The Existing Facility must have more than one processing line and show sufficient redundancy to achieve the claimed throughput rate for the Facility.

3. If a prepared-fuel/dedicated boilers system is proposed, the existing Facility must include at least two processing lines, providing the System with sufficient redundancy to assure reliable processing capability.

4. The existing traffic design must be shown to minimize traffic impacts at the site, to facilitate City delivery vehicle access, and to minimize City delivery vehicle turnaround times.

5. The Existing Facility must be operated in compliance with all applicable federal, State, local environmental permits; Occupational Safety and Health Administration requirements; GEP; and federal, State, and local laws and regulations. Fire protection systems must be in accordance with National Fire Protection Association codes, insurance underwriter requirements, GEP, and all local codes.

3.2.4 TRANSFER STATION MINIMUM TECHNICAL REQUIREMENTS

For Proposers electing to provide a Transfer Station(s) as a Point(s) of Delivery for City Waste, this section provides information on minimum technical requirements.

1. The Transfer Station(s) must be capable of receiving and transferring the amount of City Waste which the Proposer has assigned to the Transfer Station(s) from the City's various Collection Districts.

2. The Transfer Station(s) must receive waste between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday.

3. The Transfer Station(s) must be designed to be capable of processing the total daily tonnage received.

4. Waste must be transported to a Facility(ies) or Landfill(s) at a rate sufficient to prevent 48-hour storage at the Transfer Station(s).

5. The receiving and processing areas must be enclosed to minimize dust and odor emissions.

6. The Transfer Station(s) must be designed to minimize traffic impacts at the site, to facilitate delivery vehicle access, and to minimize delivery vehicle turnaround times, taking into account the arrival of City collection vehicles and any other waste collection vehicles.

7. The Transfer Station(s) must be designed and constructed to comply with all applicable industrial codes, and all applicable code requirements of the American Society of Mechanical Engineers and other technical societies, either as stated or standard in industrial practice.

8. The Transfer Station(s) must be constructed and operated in compliance with all applicable federal, State, and local environmental and other permits; Occupational Safety and Health Administration requirements; GEP; and federal, State, and local laws and regulations. Fire protection systems must be provided in accordance with national Fire Protection Association codes, insurance underwriter requirements, GEP, and all local codes.

3.2.5 LANDFILL MINIMUM TECHNICAL REQUIREMENTS

Proposers are required to include in their System adequate Landfill capacity for disposal of both residue and unprocessed waste, taking into account the disposal requirements for 240,000 TPY of City Waste, waste from other suppliers under firm contract to the Proposer, and the availability of the Facility(ies) included in their System. This section provides information on minimum technical requirements for Landfill(s).

1. The Landfill(s) must have sufficient dedicated capacity to meet the requirements for residue and unprocessed waste disposal of the City and any other suppliers under firm contract to the Proposer, taking into account the availability of the Facility(ies) included in the Proposer's System.

2. If City collection vehicles will deliver unprocessed waste to the Landfill(s), the Landfill(s) must receive waste between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday, and the Landfill(s) must be designed to minimize traffic impacts at the site, to facilitate City delivery vehicle access, and to minimize City delivery vehicle turnaround times.

3. The Landfill(s) must be designed and operated in compliance with all applicable environmental regulations; Occupational Safety and Health Administration requirements; GEP; and federal, State, and local laws and regulations. Fire protection systems must be provided in accordance with National Fire Protection codes, insurance underwriter requirements, GEP, and all local codes.

3.3 CITY WASTE INFORMATION

Information is provided below on City Waste tonnage and delivery.

3.3.1 WASTE TONNAGE

The City contracts with private firms to collect and dispose of residential waste from the 11 City Collection Districts (see Figure 3.1 for a map of these districts).

The City provides collection services to all residential households, including large apartment buildings where the owner meets City standards for 6-cubic-yard collection boxes. The amount of this waste from all City Collection Districts has averaged approximately 220,000 TPY over the past three years (see Tables 3.1 and 3.2).

The tonnage data given in these tables for waste from collection districts are based on weigh records maintained at the various disposal sites to which the collection contractors deliver the collected waste. It is anticipated that the annual tonnage of City residential waste will be reduced by approximately 5 percent as a result of the new returnable container law now in force.

The City awards separate contracts for collection and disposal of waste from each of the 11 City Collection Districts. Each collection contractor delivers waste to a designated disposal site under contract to the City. As of the Scheduled Service Date, the City will arrange to have collection contractors deliver waste to the Point(s) of Delivery designated by the Proposer.

FIGURE 3.1

Geographic Relationships of Collection Districts within City Limits

[46 square miles]

TABLE 3.1

TONNAGE OF WASTE COLLECTED AND DISPOSED OF
FOR THE CITY FOR LAST 2 FISCAL YEARS * (TONS)

MONTH	FY 1982/1983	FY 1983/1984
July	18,900	15,900
August	19,100	17,900
September	18,800	17,600
October	17,800	16,900
November	20,300	19,500
December	17,600	17,000
January	14,500	14,600
February	12,300	15,900
March	16,800	15,500
April	17,000	18,800
May	18,800	22,000
June	19,600	19,900
Subtotal	211,200**	211,400**
Pushcarts (total 12-month period)	1,900	2,200
Highway (total 12-month period	2,100	2,300
TOTAL	215,900	215,900

* Fiscal year runs from July through June.

** Numbers may not add due to rounding.

TABLE 3.2

ANNUAL TONNAGE OF WASTE COLLECTED AND DISPOSED OF BY COLLECTION CONTRACTORS FOR THE LAST TWO FISCAL YEARS* BY DISTRICT (TONS)

DISTRICT	FY 1982/1983	FY 1983/1984
1A	6,400	5,900
1B	28,400	28,500
2	17,800	16,000
3	22,700	23,800
4	20,500	19,600
5	10,400	10,400
6	20,300	21,300
7	28,400	29,500
8	17,000	16,600
9	12,100	12,200
10	27,200	27,600
Subtotal	211,200**	211,400**
Pushcarts	1,900	2,200
Highway	2,100	2,300
TOTAL	215,200 TPY	215,900 TPY

* Fiscal year runs from July through June.

** Numbers may not add due to rounding.

In addition, the City collects waste from public areas within the City. The City has recently assumed responsibility for arranging for disposal of Boston Housing Authority (BHA) waste. There are no weigh records for this waste. However, based on the number of units and occupancy data, the City estimates that this represents approximately 20,000 TPY. BHA waste will be included in the total of City Waste which requires disposal.

Commercial and industrial entities within the City make separate arrangements for collection and disposal of their waste.

3.3.2 WASTE DELIVERY

Table 3.3 provides information on the use of collection vehicles within each of the 11 City Collection Districts. This information is based on current contracts between the City and the various collection contractors. The collection contractors operate from 7:00 a.m. to 5:00 p.m., Monday through Saturday.

3.4 KEY ENVIRONMENTAL REQUIREMENTS

The information provided below is appropriate for new or existing facilities, landfills, and transfer stations located in the State. Specific requirements depend on the type of facility(ies), landfill(s), or transfer station(s) and its associated capacity. This information is included to provide Proposers with a general basis for preparing their responses to this RFP and developing a permitting plan and schedule. The requirements discussed may not be all-inclusive and do not reflect site-specific environmental requirements that may also have to be addressed depending on the Proposer's planned sites. Moreover, there are several permitting issues that Proposers may want to seek resolution to before submitting their Proposals.

The regulatory climate in the Commonwealth of Massachusetts regarding waste-to-energy facilities is in transition. Within the past year, the Massachusetts Department of Environmental Quality Engineering (DEQE) has issued a policy statement regarding air pollution control for these facilities. According to this policy statement, the following control systems and associated performance levels are considered Best Available Control Technology (BACT) for waste-to-energy facilities:

- Particulate control device designed for an outlet grain loading of 0.03 grains per dry standard cubic foot (gr/dscf) at 12-percent CO_2.
- Acid gas control system designed for an outlet concentration of 50 ppmdv of hydrogen chloride (HCl) at 12-percent CO_2.

TABLE 3.3

TRUCK USAGE FOR COLLECTION IN 11 PWD DISTRICTS*

PWD DISTRICT	NO. OF TRUCKS UTILIZED PER DAY	NO. OF DAYS PER WEEK TRUCKS OPERATE
1A	1 or 2	5
1B	7	6
2	3	5
3	4	5
4	4	5
5	3	5
6	4	5
7	7	5
8	3	5
9	2	5
10	5	6

* Trucks are in service from 7:00 a.m. to 5:00 p.m.

Specific control technology requirements and associated performance criteria will be determined as part of the air quality permitting process.

3.4.1 SUMMARY

The Proposer's Facility(ies), Landfill(s), and Tranfer Station(s) will be subject to all federal, State, and local environmental laws and regulations. The major anticipated permit and approval requirements are listed in Table 3.4. These regulations are briefly described in the following subsections.

3.4.2 MASSACHUSETTS ENVIRONMENTAL POLICY ACT

The Massachusetts Environmental Policy Act (MEPA) requires that, when applying for permits from the DEQE, the applicant must notify the Secretary of Environmental Affairs of such an application. Upon receipt of a completed Environmental Notification Form (ENF), the Secretary has 30 days to review the ENF and determine whether or not an EIR is required. The current policy of the Massachusetts Office of Environmental Affairs is to require the preparation of an Environmental Impact Report (EIR) for a new or modified resource recovery facility having a processing capacity in excess of 300 TPD.

No permits can be issued by DEQE until: (1) either a negative determination regarding the need for an EIR is made by the Office of Environmental Affairs, or an EIR is approved by the Office of Environmental Affairs; and (2) the appropriate Board of Health has assigned the land at the site for use for a waste-to-energy facility, transfer station, or landfill. All of the permits listed in Table 3.4 must be obtained prior to commencing construction.

There is no regulatory agency that provides a permit coordinating function.

3.4.3 AIR QUALITY REGULATIONS

Waste-to-energy facilities are subject to various State and federal air quality regulations which impose both permitting requirements for new or modified sources and specific emission standards for expected pollutant discharges. Provided in the following subsections are discussions pertaining to applicable permitting requirements and emissions standards.

TABLE 3.4

ANTICIPATED MAJOR PERMIT AND APPROVAL REQUIREMENTS
FOR WASTE-TO-ENERGY FACILITIES

PERMIT/APPROVAL	ISSUING AGENCY
AIR PERMIT	
State Air Permit (includes federal PSD and NA area requirements)	DEQE
SOLID WASTE PERMIT	
1. Transfer Station Permit	DEQE
2. Landfill Permit	DEQE
WATER PERMITS	
1. Industrial User Sewer Permit	Local Sewer Commission
2. State Industrial User Sewer Permit	DEQE
LAND USE	
Assignment of Land for Use for Waste-to-Energy Facility	Local Board of Health
NOISE	
Noise Guidelines	DEQE

3.4.3.1 Permitting Requirements

The owner or operator of a new or modified source is required to perform specific analyses and prepare necessary permit applications before commencing construction. These requirements are contained in the following State and federal regulations:

- DEQE Approval of Plans and Specifications (310 CMR 7.02)
- Prevention of Significant Deterioration (PSD) Regulations (40 CRF 52.21)
- Nonattainment (NA) Area Regulations (310 CMR 7.00, Appendix A)
- Good Engineering Practice (GEP) Stack Height (40 CFR 51).

These regulations are discussed below in the context of a new or modified waste-to-energy facility.

1. DEQE Approval of Plans and Specifications

   Pursuant to 310 CMR 7.02, the DEQE must issue approval of plans and specifications for a new or modified waste-to-energy facility with a charge rate of 50 TPD or more before construction may commence. To obtain such approval, the owner or operator of the facility must submit specifications, engineering drawings, operating and maintenance procedures, and completed DEQE design data sheets. The DEQE must subsequently issue a letter of compliance before operation may commence, following submission of final plans and specifications and demonstration of conformance with all requirements in the DEQE approval.

2. PSD Regulations

   The applicability of the PSD regulations depends on the attainment status of the proposed site with regard to criteria pollutants. A new or modified facility may be subject to the requirements of the PSD regulations for those criteria pollutants for which the site is designated as either an attainment or unclassified area and other pollutants regulated under the Clean Air Act.

   A facility will be classified as a municipal incinerator if potential emissions of one or more pollutants are equal to or greater than 100 TPY. A new or modified facility with a charge rate greater than 250 TPD will be classified as a major source subject to PSD regulations administered by DEQE. A facility

with a charge rate of 250 TPD or less is subject to PSD regulations if emissions are 250 TPY or more. According to these regulations, the applicant for a PSD permit must meet the following requirements for all regulated pollutant emissions exceeding the de minimis emission rates defined by the U.S. Environmental Protection Agency (EPA).

- Demonstration that BACT will be applied for those pollutants.

- Review of ambient air quality in the vicinity of the major new source.

- Demonstration of compliance with ambient air quality standards and PSD allowable increments, following operation of the source.

- Analysis of the effects resulting from operation of the source on vegetation, soils, and visibility, and impacts of secondary growth.

Proposers should seek resolution of the need for air quality monitoring with DEQE.

3. Nonattainment (NA) Area Regulations

If the proposed site is designated an NA area for a given pollutant, a new or modified facility emitting 100 TPY or more of that pollutant is subject to NA area regulations for that pollutant. Furthermore, a facility emitting 100 TPY of any criteria pollutant is subject to those regulations if it has a significant impact in an adjacent NA area. According to the NA area regulations, the applicant must demonstrate compliance with Lowest Achievable Emission Rate (LAER). For waste-to-energy facilities, DEQE may grant postponement of the requirement to obtain emission offsets if the applicant demonstrates that offsets are not immediately available. Once offsets become available, they must be secured without delay.

4. GEP Stack Height

EPA and DEQE regulations prohibit the use of stack heights in excess of GEP in the air quality impacts analyses required under PSD and NA area regulations. The Proposer will be required to demonstrate that the proposed stack heights conform with applicable federal and State requirements.

3.4.3.2 Emissions Standards

EPA and DEQE have issued emission standards and control technology requirements which impose constraints on the design and operation of a waste-to-energy facility. These regulations include:

- DEQE Air Pollution Control Regulations (310 CMR 7.00)
- New Source Performance Standards (NSPS) (40 CFR 60)
- National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 61)
- BACT and LAER requirements.

Emissions standards and control technology requirements that may be applicable to the Proposer's Facility(ies) are summarized below.

1. DEQE Regulations

   DEQE regulations limit particulate emissions from new or modified incinerators with a charge rate of 50 TPD or more to 0.05 gr/dscf at 12-percent CO_2 [310 CMR 7.02(11)]. Visible emissions are limited to 20 percent at any time [310 MCR 7.06(2)]. Dust and odor emissions are also subject to DEQE regulations [310 CMR 7.09(1)].

2. New Source Performance Standards (NSPS)

   The NSPS constitute a set of national emission standards which apply to specific categories of new or modified sources. The NSPS for Incinerators (40 CFR 60, Subpart E) apply to units having a charge rate of 50 TPD or more. These standards limit particulate emissions to 0.08 gr/dscf corrected to 12-percent CO_2. The NSPS for Industrial Boilers (49 FR 25102) were proposed on June 19, 1984. These proposed standards would apply to new or modified boilers fired with solid waste having a heat input rate of 100 MMBtu/hr or greater. The proposed NSPS would limit particulate emissions to 0.10 lb/MMBtu and visible emissions to 20-percent opacity (6-minute average).

3. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

   The NESHAP are a set of national emission standards which apply to new and existing sources of hazardous air pollutants listed by EPA. To date, NESHAP for beryllium (40 CFR 61, Subpart C) are the only standards that may be applicable to the Proposer's Facility(ies). These standards limit beryllium emissions from incinerators processing beryllium-containing waste from sources subject to these standards to 10 grams for each 24-hour period.

4. BACT and LAER Requirements

Notwithstanding specific emission standards, BACT must be applied for all regulated pollutants subject to PSD regulations. Furthermore, the Proposer's Facility(ies) must comply with LAER for those pollutants subject to NA area regulations. For particulates, an outlet grain loading ranging from 0.04 to 0.05 gr/dscf at 12 percent CO_2 has previously been specified as BACT for permitted facilities[2] in the State. The determination of BACT or LAER for other pollutants will be made by DEQE on a case-by-case basis.

3.4.4 SOLID WASTE REGULATIONS

The owner or operator of a new or modified Transfer Station(s) and Landfill(s) must obtain approval from the DEQE before construction may commence. The DEQE requirements for these operations are discussed below.

3.4.4.1 Transfer Stations

All transfer stations located in the State must obtain approval from DEQE before construction may commence (320 CMR 18.03). To obtain approval, tranfer stations must comply with the following key requirements:

- Duplicate equipment capable of processing the expected daily tonnage must be provided. Alternative methods of handling daily tonnage may be approved by DEQE.
- Measures of prevention and control of fires must be taken. Minimum requirements are specified in the regulations.
- Access roads must be paved to minimize dust and designed to facilitate traffic flow at the site.
- Measures shall be taken to prevent scattering of wind-blown litter, and routine maintenance shall be provided.
- Suitable measures shall be taken to control dust at the site.
- Transfer stations must comply with DEQE Air Pollution Control Regulations.

Additional requirements and prohibitions are specified in the regulations.

A letter of compliance with DEQE approval must be received from DEQE before a transfer station may commence operation.

3.4.4.2 Landfills

All landfills located in the State must obtain approval from DEQE before construction or alteration may commence (310 CMR 19.03). To obtain approval, landfills must comply with the following key requirements.

- Adequate equipment and routine maintenance must be provided to ensure proper operation of the landfill.
- Cover material must meet specific requirements and a quantity of cover material sufficient for two months of operation must be available.
- Measures for prevention and control of fires must be taken. Minimum requirements are specified in the regulations.
- Access roads must be designed to facilitate traffic flow at the site.
- Refuse must be spread in shallow layers not exceeding 2 feet in thickness and compacted before spreading of each additional layer.
- The operator must apply at 6 inches of compacted cover material on exposed refuse at the end of each working day. An impervious layer of intermediate cover must be placed on the operation within one month of placing refuse on that portion, and a final layer of cover material must be placed on the entire surface of a completed section.
- Measures must be taken to prevent scattering of wind-blown litter, and routine maintenance must be provided.
- Suitable measures must be taken to control dust at the site.

Additional requirements and prohibitions are specified in the regulations.

DEQE also has draft regulations for disposal of solid waste at landfills that are intended to prevent contamination of groundwater. These draft regulations would require, at a minimum, groundwater monitoring, liners, and leachate collection and treatment. DEQE

plans to promulgate these regulations this year. New or expanded landfills would be subject to the specific requirements of these regulations pursuant to 310 CMR 19.03.

A letter of compliance with DEQE approval must be received from DEQE before a landfill may commence operation.

3.4.5 WATER QUALITY PERMITTING

Wastewater can be discharged to a municipal sanitary or combined sewer system (the type of sewer system is site-specific). The discharge must conform to the DEQE, local, and, if applicable, Metropolitan District Commission (MDC) regulations. Permits for such a discharge are issued: (1) by the local and, if applicable, MDC sewer commissions, and (2) by DEQE. Pollutant-specific discharge limitations are decided on a case-by-case basis in accordance with guidelines for heavy metals, pH, oil and grease, chlorides, sulfates, arsenic, and boron.

Stormwater cannot be discharged to a sanitary sewer system. It can only be discharged to a storm sewer system or, if separate sewers do not exist, to a combined sewer system.

3.4.6 LAND USE

The appropriate Board of Health must assign land use at the prospective site for a new or modified waste-to-energy facility, landfill, or transfer station (Massachusetts General Law, Chapter 111). This process requires a public hearing. DEQE cannot issue any permits until such land assignment has been made.

3.4.7 NOISE PERMITTING

Pursuant to 310 CMR 7.10, DEQE has established noise criteria for new or modified facilities. Such a facility must prevent either of the following two conditions: (1) increasing the broadband noise level in excess of 10 dBA above background; or (2) producing a pure tone noise.

Depending on site location, there may also be local noise regulations.

3.5 INSTRUCTIONS FOR PREPARING TECHNICAL PROPOSALS

This section gives instructions on the organization and content of the Technical Proposal. The instructions are specific to the Waste Disposal Service System as a whole and to each of the System

components: Facility(ies) (New and Existing), Transfer Station(s), and Landfill(s). Depending on the specific components of its System, the Proposer will follow the appropriate instructions. An outline to be followed in preparing and submitting each component of the Technical Proposal is included with each set of instructions. Technical Proposal Forms are provided for each System component.

3.5.1 WASTE DISPOSAL SERVICE SYSTEM

All Proposers must complete this section. The Proposer shall define the overall System offered by completing Waste Disposal Service System Technical Form A. The Proposer must indicate the type and number of each System component. For each component, the Proposer must indicate whether or not a site assignment has been obtained. For each component, the Proposer must also provide a complete listing by source of waste suppliers under firm contract to the Proposer. The Proposer must indicate the total capacity of each component, how much of that capacity is committed to others, and how much is available to the City. Additionally, the Proposer must provide the expected date of commercial operation for each component. The Proposer must also specify the Point(s) of Delivery for City Waste by DPW by completing Waste Disposal Service System Technical Form B.

I. OUTLINE FOR WASTE DISPOSAL SERVICE SYSTEM COMPONENT OF TECHNICAL VOLUME

A. Data Forms

1. Waste Disposal Service System Technical Proposal Form A
2. Waste Disposal Service System Technical Proposal Form B

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL FORM A

SYSTEM DEFINITION

1. System Components and Number

   a. New Facility(ies) _____
   b. Existing Facility(ies) _____
   c. Transfer Station(s) _____
   d. Landfill(s) _____

2. Component Description

   a. New Facility(ies):

      1. Location: _____

         Site Assignment has been obtained Yes___ No___

         Capacity:

         Plant Capacity Committed to Others
         (list each waste supplier)

         Waste Supplier _____
         Annual Tonnage Contracted for _____
         Contract Termination Date _____

         Waste Supplier _____
         Annual Tonnage Contracted for _____
         Contract Termination Date _____

         Total Committed to Others _____ TPY
         Capacity Available to City _____ TPY
         Total Capacity _____ TPY

         Expected Date of Commercial Operations _____

      2. Location: _____

         Site assignment has been obtained Yes___ No___

         Capacity:

         Plant Capacity Committed to Others
         (list each waste supplier)

         Waste Supplier _____
         Annual Tonnage Contracted for _____
         Contract Termination Date _____

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL FORM A (continued)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Total Committed to Others: _____TPY
Capacity Available to City _____TPY
Total Capacity _____TPY

Expected Date of Commercial Operations _____

b. Existing Facilities:

1. Location:_____

Site assignment has been obtained: Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Total Committed to Others: _____TPY
Capacity Available to City _____TPY
Total Capacity _____TPY

Expected Date of Commercial Operations _____

2. Location:_____

Site assignment has been obtained Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL FORM A (continued)

Waste Supplier _____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Total Committed to Others: _____ TPY
Capacity Available to City _____ TPY
Total Capacity _____ TPY

Expected Date of Commercial Operations _____

c. Transfer Station(s)

1. Location: _____
New: _____ or Existing _____

Site assignment has been obtained: Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

Waste Supplier _____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Waste Supplier _____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Total Committed to Others: _____ TPY
Capacity Available to City _____ TPY
Total Capacity _____ TPY

Expected Date of Commercial Operations _____

2. Location: _____
New: _____ or Existing _____

Site assignment has been obtained Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL FORM A (continued)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Total Committed to Others: _____ TPY
Capacity Available to City _____ TPY
Total Capacity _____ TPY

Expected Date of Commercial Operations _____

d. Landfill(s)

1. Location:_____
New: _____ or Existing _____
Utilization:

Bypass/Residue: _____
Unprocessed Waste: _____

Site assignment has been obtained Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____
Total Capacity _____ TPY
Total Committed to Others: _____ TPY for ___ years
Capacity Available to City _____ TPY for ___ years

2. Location:_____
New: _____ or Existing _____
Utilization:

Bypass/Residue: _____
Unprocessed Waste: _____

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL FORM A (continued)

Site assignment has been obtained Yes___ No___

Capacity:

Plant Capacity Committed to Others
(list each waste supplier)

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____

Waste Supplier_____
Annual Tonnage Contracted for _____
Contract Termination Date _____
Total Capacity _____TPY

Total Committed to Others: _____ TPY for ___ years
Capacity Available to City _____ TPY for ___ years

WASTE DISPOSAL SERVICE SYSTEM TECHNICAL PROPOSAL FORM B

POINT(S) OF DELIVERY

Beside each collection district, the Proposer will indicate the System component it designates as the Point of Delivery for that district; the location of the System component; and the capacity of that System component.

POINTS OF DELIVERY:

DPW COLLECTION DISTRICT	SYSTEM COMPONENT*	LOCATION	CAPACITY (TPY)**
1a			
1B			
2			
3			
4			
5			
6			
7			
8			
9			
10			

* New Facility, Existing Facility, Transfer Station, or Landfill.

** Refer to Table 3.2.

3.5.2 NEW FACILITIES

Proposers including a New Facility(ies) as a component in their System are to complete this section.

3.5.2.1 General

The Technical Proposal must contain sufficient detail to describe the technical design and operation of the New Facility(ies). The New Facility(ies) component of the Technical Proposal will consist of narrative descriptions, diagrams, drawings, schedules, and data forms, and will be prepared and submitted in accordance with the following outline. Instructions for preparing each section of the New Facility(ies) component of the Technical Proposal shown in the outline are given in the following subsections, followed by New Facility Technical Forms A through I. Proposers will provide the information as requested and as applicable to each of (if more than one) their proposed Facility(ies).

3.5.2.2 Narrative Descriptions

1. Site Information. The Proposer must complete New Facilty Technical Proposal Form A. In addition, the Proposer must discuss the technical suitability of the site and submit the results of all technical evaluations and engineering reports in regard to the alternative site. The Proposer must also discuss site zoning and surrounding land uses. The Proposer must then discuss the rationale for the location of the Facility within the selected site and the benefits of this location. In addition, the Proposer must describe the proposed traffic route to the Facility.

2. Energy Market Information. The Proposer will identify the purchaser(s) of the energy produced by the Facility. The Proposer will then supplement New Facility Technical Proposal Form B with a discussion of how the Facility will meet the energy user's contractually stipulated performance requirements and the expected production levels for steam and/or electricity. In addition, the operating relationship between the Facility and the energy user's plant must be described.

3. General Facility Design and Operation. The Proposer will discuss the design and operation of the various units and equipment that are being offered. The Proposer must describe the equipment to be used, stating size, capacity, and other pertinent design data necessary to convey a clear description of the Facility. This discussion will refer to the simplified facility diagram [see subsection 3.5.2.3(1)], state how various components are to be operated, and describe the integration of

the operation and control of the entire Facility. Particular attention will be paid to the methods of: (1) receiving, storing, preparing (if applicable), and feeding waste into the furnaces; (2) completing and controlling combustion within the furnaces; (3) controlling steam conditions and flow to the turbine and/or steam conditions and flow to the steam user; (4) sustaining high furnace/boiler efficiencies; (5) complying with emission regulations; and (6) maintaining personnel safety.

4. Project Management Approach. The Proposer will discuss the project management approach to be used during the design through the Service Date. The Proposer's plan for staffing, meeting management requirements, and implementing management controls must be included. The New Facility(ies) component of the Technical Proposal will include an organization chart listing necessary positions by skill and the number of people required for each organizational element.

5. Operating and Management Approach. The Proposer will discuss the operating and management approach to be used during operations. The Proposer's plan for staffing, meeting management requirements, and implementing management controls must be included. The New Facility(ies) component of the Technical Proposal must also include an organization chart (as above), as well as the Proposer's accounting procedures for monitoring and recording the waste stream into the Facility; unprocessed waste and residue streams out of the Facility; steam and/or electricity sold to the energy users; and any recovered materials sold.

6. Operating and Maintenance and Capital Costs. The Proposer must provide a budgetary estimate of operating and maintenance costs and capital costs (see New Facility Technical Proposal Forms D and E). These costs will be given in July 1985 dollars and will include haul and disposal costs for unprocessed waste, unprocessibles, and residue to the landfill.

7. Maintenance Program Approach. The Proposer will discuss the plan and procedures for all routine and long-term maintenance of Facility equipment.

8. Environmental Permitting. In this discussion, the Proposer will provide a statement of its ability to comply with all environmental regulations and limitations stated in subsection 3.3, as well as any site-specific or otherwise applicable environmental regulations. The Proposer will also provide an environmental permitting plan, including a schedule.

9. Availability Analysis. The Proposer will complete the availability data sheets for the boilers/furnaces, and, if applicable, for the front-end processing lines and the turbine-generator set (see New Facility Technical Proposal Forms E through G. The Proposer will discuss the methodology and basis used to prepare the availability data sheets. In this discussion, reference should be made to available data from similar facilities.

10. On-Site Traffic Handling Design. The Proposer will discuss its procedures for handling vehicle traffic within the site as well as on the tipping floor, and for assuring that delivery vehicles will have ready access.

    The Proposer will state the total time required (in minutes) for an incoming vehicle to enter the queing line, unload onto the floor or into the pit, and exit. The time can be expressed as a range or as a maximum and minimum. The assumptions or data used to arrive at this turnaround time will be provided. The discussion will confirm that sufficient tipping bays are provided to support the Proposer's stated vehicle traffic and turnaround time.

11. Waste Storage Capacity Analysis. The Proposer will discuss the Facility's waste storage capacity and indicate the minimum amount of storage to be provided. The storage area must be clearly defined in the equipment general arrangement drawings [see subsection 3.5.2.3(6)]. All assumptions (e.g., pile height and density) used to develop the indicated storage capacity must be provided.

12. Prepared-Fuel Storage Capacity Analysis (if proposed). The Proposer will discuss the Facility's prepared-fuel storage capacity and indicate the minimum capacity to be provided. The storage area must be clearly defined in the equipment general arrangement drawings [see subsection 3.5.2.3(6)]. All assumptions used to develop the storage capacity must be provided.

13. Residue Storage Capacity Analysis. The Proposer will describe the residue storage system. The storage area must be clearly defined in the drawings. All assumptions used to determine the amount of residue storage must be provided.

14. Waste Transfer Capability. The Proposer will discuss the methods by which the Facility will provide for the transfer or diversion of waste during periods of prolonged plant shutdown.

15. Backup Landfill. The Proposer must discuss provisions for a backup landfill(s) and provide all data requested on New Facility Technical Proposal Form H.

16. Steam Transmission Line. If appropriate, the Proposer will discuss in detail the routing and the design, including the type of support structure, proposed for the steam transmission line. The Proposer must confirm that it will meet all interconnection requirements.

17. Electricity Interconnection. The Proposer will describe in detail the location and type of electrical transmission line and equipment for interconnection to the user. The Proposer must confirm that the proposed interconnection design is based on discussions with the energy market.

18. Refuse-Derived Fuel Market. If sale of RDF to an off-site user is proposed, the Proposer will complete all information on New Facility Technical Proposal Form C.

19. Refuse-Derived Fuel Components. The Proposer will discuss in detail the methods and equipment to be used to store, transfer, and feed RDF into the boilers (either dedicated furnace/boilers or existing furnace/boilers at the buyer's facility). This discussion will refer to the RDF feed component drawings (see subsection 3.5.2.3).

20. Refuse-Derived Fuel Cofiring and Test Burn Results. If RDF is to be cofired with fossil fuel in an existing furnace/boiler(s), the Proposer will provide a detailed discussion on the effect of this cofiring on this furnace/boiler. This discussion must, at a minimum, address the fuel mix, the resultant ash composition, the furnace temperature, and resultant products of combustion and their corrosive effect on the boiler. The discussion will reference test burn results or actual operating data. The Proposer must also provide all fuel specifications that have been imposed by the fuel buyer, discuss the program that will be implemented to ensure the quality of the fuel, and describe the contractual requirements of both parties if the fuel specifications can not be met.

21. Architectural Treatment. The Proposer will discuss the plans for providing the site preparation and finishing requirements. The discussion will refer to the architectural rendering [see subsection 3.5.2.3(10)]. The Proposer will discuss the materials and types of construction to be used for the buildings.

22. Proposer Qualifications. The Proposer will provide detailed information on its experience with respect to the technology proposed. This will include information on its experience with similar projects, including the design, construction,

construction management, turnkey, full-service, and operating aspects of these projects. For each project, the Proposer must provide the following information:

A. The facility and its location.

B. The processing capacity of the facility (in TPD or TPY).

C. Facility performance characteristics.

D. The Proposer's role in the project (e.g., design, construction, operation).

E. The project sponsor or Proposer's client.

F. When the project was initiated.

G. Current facility status.

H. A discussion of: (1) any delays in construction and reasons for such delays; and (2) any extended shutdowns, reasons for such shutdowns, and corrective action taken.

I. Major milestones actually achieved.

J. Current plant manager, including business address and telephone number.

The Proposer will also provide demonstration that the Facility(ies) as proposed is commercial proven, in accordance with the criterion specified in subsection 3.2.2, based on the Proposer's (or members of the Proposer's team) experience with a facility of comparable size that is currently in operation. Operating data from existing facilities employing similar technology and/or componenets must be provided.

Finally, the Proposer must submit information on the relevant experience of the entities who will perform:

- Project management and procurement (design through Scheduled Service Date)
- Facility design
- Air pollution control and equipment design
- Construction management
- Project management (operations).

The Proposer will avoid providing extraneous information. Company brochures and sales materials will be kept to a minimum.

3.5.2.3 Diagrams, Drawings, and Schedule

The following diagrams, specified in items 1, 2, and 3, must clearly indicate total Facility inputs and outputs, and that portion of the inputs and outputs that is attributable to Waste supplied by the City, assuming that City Waste has the ultimate analysis depicted in Table 3.5. The ultimate analysis is provided as design information and does not represent a composition guarantee by the City.

1. Simplified Facility Diagram. The Proposer will submit a simplified facility diagram showing all of the functions included in the conversion of waste to energy. The diagram must also indicate major process control elements.

2. Mass Flow Diagram. A mass flow diagram must be provided to account for all mass entering and leaving the waste-processing system, the steam-generating system, and the electricity-generating and auxiliary systems (if applicable). The diagram will be presented to show clearly the individual mass flow streams through the systems in pounds per hour (lb/hr) (except for generator outputs, which will be given in kW). At a minimum, the following streams must be accounted for:

   - Inputs:
     - Waste
     - Prepared fuel (if applicable)
     - Fossil fuel (if any)
     - Combustion air (at $80^{o}F$)
     - Chemicals for water treatment.
   - Outputs:
     - Unburned combustibles in residue
     - Processing rejects (if applicable)
     - Bottom ash (dry and wet)
     - Fly ash
     - Emitted particulate
     - Flue gas
     - Process wastewater
     - Steam
     - Electricity (if applicable)
     - Recovered materials (if applicable).

   The flow diagram will indicate inputs and outputs based on both the rated capacity of the Facility and the average daily throughput.

TABLE 3.5

ULTIMATE ANALYSIS
(as-received and as-fired)

	% by Weight
Moisture	22.00
Noncombustibles and Ash	28.00
Carbon	24.70
Hydrogen	3.50
Oxygen	21.00
Nitrogen	0.50
Sulfur	0.10
Chlorine	0.20
TOTAL	100.00%
HHV	4,500 Btu/lb

If an extraction-condensing turbine-generator is proposed where steam is extracted for sale, the mass flow around the turbine-generator must indicate for the same boiler outlet the following two cases:

a. Maximum auto-extraction steam flow to the steam user and minimum condenser flow (lb/hr).

b. Zero auto-extraction steam flow to the steam user and maximum condenser flow (lb/hr).

Generator outputs for each case will be given in kW and will indicate gross electricity production, electricity used in-house, and electricity sold to the electricity user. The steam flows will be taken from the heat balance diagram (see subsection [3.5.2.3(4)].

The mass flow diagram must be accompanied by sufficient calculations, field data, analytic assumptions, and clearly identified engineering assumptions to permit verification of the Proposer's claim of system performance.

3. Energy Balance Diagram. The Proposer will provide an energy balance diagram. The energy balance will account for all the energy inputs and outputs for the Facility on a Btu-per-hour basis.

At a minimum, the following streams must be accounted for:

- Inputs:
  - Waste
  - Prepared fuel (if applicable)
  - Fossil fuel (if any)
  - Purchased power.

- Outputs:
  - Steam to energy user
  - Gross electricity (if applicable)
  - Electricity to energy user (if applicable)
  - Energy losses in combustion process
  - Energy losses in steam cycle.

The balance will use an ambient air temperature of $80^{o}F$ and a raw water temperature of $50^{o}F$.

The energy balance around the turbine-generator set (if applicable) will indicate for the same boiler outlet the following two cases:

a. Maximum auto-extraction steam flow to the steam user, minimum condenser flow, and corresponding gross electricity production and electricity sold to the electricity user (Btu/hr).

b. Zero auto-extraction steam flow to the steam user, maximum condenser flow, and corresponding gross electricity production and electricity sold to the electricity user (Btu/hr).

4. Heat Balance Diagram. The Proposer will provide a detailed heat balance (steam cycle) diagram clearly depicting flow, state, pressure, temperature, and enthalpy for each stream. The diagram will include the complete thermodynamic cycle beginning with treated makeup water and ending with delivered steam and/or electricity. All steam usage will be accounted for in lbs/hr and will include, at a minimum:

- Export steam flow
- Throttle flow (if applicable)
- Turbine extractions (if applicable)
- Boiler blowdown
- Auxiliary equipment drives
- Plant heating
- In-plant condensate return
- Soot blowing
- Deaerator load
- Condensate return from steam user (if applicable).

The heat balance diagram will be based on both the rated capacity of the Facility and the annual average throughput.

If applicable, the heat balance around the turbine-generator set will indicate for the same boiler outlet the following two cases:

a. Maximum auto-extraction steam flow to the steam user and minimum condenser flow (lb/hr).

b. Zero auto-extraction steam flow to the steam user and maximum condenser flow (lb/hr).

5. Site Plot and Utility Plan. The Proposer will provide a site plot plan showing the location of the Facility within the site. The site plot plan will locate scales, the roadway(s) entering and exiting the site, the parking area, the steam line routing (if applicable), and the electrical substation (if applicable); and will provide the outline of all buildings (processing,

administration, etc.) and all major equipment, including air pollution control equipment, stacks, and cooling tower (if applicable). Waste, prepared fuel (if applicable), and residue storage will also be shown. In addition, the site plot plan will depict truck traffic flow, and show all existing easements, property lines, and grades.

The Proposer must also provide a utility plan showing routing and points of connection with all the necessary utilities. Line sizes must be clearly indicated.

6. Equipment General Arrangements and Elevations. The Proposer will provide complete equipment general arrangements and elevations drawn to scale and dimensioned to clearly indicate the location of all major equipment systems, buildings, scales, etc.

   If applicable, the steam transmission line from the Facility to the tie-in point with the energy user must also be shown in plain view.

7. Refuse-Derived Fuel Feed Component Drawings. Drawings of the RDF storage, transfer, and feed components into the furnace/boiler will be provided. These drawings will be provided whether energy production is in dedicated furnace/boiler or cofired with fossil fuel in an existing boiler.

8. Process Control and Electrical Distribution Diagrams. The Proposer will provide process control diagrams that describe the combustion control logic and indicate the electrical and instrumentation hardware used. The diagrams must show how steam quality, condition, and flow control is integrated with furnace combustion controls.

9. Steam Interconnection Diagram. The Proposer will provide a diagram showing the steam transmission line from the Facility to the tie-in point with the energy user.

10. Electricity Interconnection Diagram. The Proposer will provide a diagram showing the distribution of power from the generator bus to the energy user.

11. Architectural Rendering. The Proposer will provide a clear and realistic artist's rendition showing the Facility's architectural relationship to the surrounding environment.

12. Schedule. The Proposer will provide a complete project schedule for the design through the Scheduled Service Date.

3.5.2.4 Technical Proposal Forms

The Proposer must complete New Facility Technical Proposal Forms A through I.

II. OUTLINE FOR NEW FACILITY COMPONENT OF TECHNICAL PROPOSAL VOLUME

A. Narrative Descriptions (as applicable)

1. Energy Market Information
2. Site Information
3. General Facility Design and Operation
4. Project Management Approach
5. Operating and Management Approach
6. Maintenance Program Approach
7. Operating and Maintenance and Capital Costs
8. Environmental Permitting
9. Availability Analysis
10. On-Site Traffic Handling Design
11. Waste Storage Capacity Analysis
12. Prepared-Fuel Storage Capacity Analysis
13. Residue Storage Capacity Analysis
14. Waste Transfer Capability
15. Backup Landfill
16. Steam Transmission Line
17. Electricity Interconnection
18. Refuse-Derived Fuel Market
19. Refuse-Derived Fuel Components
20. Refuse-Derived Fuel Cofiring and Test Burn Results
21. Architectural Treatment
22. Proposer Qualifications

B. Diagrams, Drawings, and Schedule (as applicable)

1. Simplified Facility Diagram
2. Mass Flow Diagram
3. Energy Balance Diagram
4. Heat Balance Diagram
5. Site Plot and Utility Plan
6. Equipment General Arrangements and Elevations
7. Refuse-Derived Fuel Feed Component Drawings
8. Process Control and Electrical Distribution Diagrams
9. Steam Interconnection Diagram
10. Electricity Interconnection Diagram
11. Architectural Rendering
12. Schedule

C. Data Forms (as applicable)

1. New Facility Technical Proposal Form A
2. New Facility Technical Proposal Form B
3. New Facility Technical Proposal Form C
4. New Facility Technical Proposal Form D
5. New Facility Technical Proposal Form E
6. New Facility Technical Proposal Form F
7. New Facility Technical Proposal Form G
8. New Facility Technical Proposal Form H
9. New Facility Technical Proposal Form I

NEW FACILITY TECHNICAL PROPOSAL FORM A

1. Current Owner: _____

2. Address: _____

3. Location: _____
_____

4. Area Available for Waste-to-Energy Facility: _____sq ft

5. Current Zoning: _____
_____

6. Proximity to Energy Market: _____
_____

7. Is site in a designated wetlands, coastal zone, or another specially designated area? _____
_____

8. Have borings and soils investigation been conducted? Yes: ____ No: ____

9. Has a site assignment been obtained? Yes: ____ No: ____

10. If an existing facility is to be modified, does the site assignment allow for the modification? Yes: ____ No: ____

11. If the answer to number 9 is yes, a copy of the site assignment must be included.

12. If the answer to number 9 is no, provide a detailed discussion on how the site assignment will be obtained or modified.

13. Does the Proposer have exclusive rights to the site for the term of the contract with the City? Yes: ___ No: ___

---

* Results of technical evaluations and engineering reports must also be provided.

NEW FACILITY TECHNICAL PROPOSAL FORM A (continued)

14. If the answer to number 13 is no, discuss in detail the present status of the site and the methodology and schedule the Proposer will utilize in obtaining exclusive rights for the term of the contract with the City.

NEW FACILITY TECHNICAL PROPOSAL FORM B

ENERGY MARKET

1. Name of Energy Market:_____

   Manufactured Products (if applicable):_____

2. Address:_____
   _____
   _____

3. Name and Address of any Parent Company:_____
   _____
   _____

4. Name and Telephone Number of Contract as Energy Market:
   _____
   _____
   _____

5. Energy Sales Contract:

   a. Term of contract:_____
   b. Conditions of contract:_____
      _____
      _____

6. Energy Product(s) to be Sold:

   a. Steam: Quantity: avg. _____lbs/hr; peak _____lbs/hr;
      minimum_____lbs/hr

      Conditions:_____psig; _____^{o}F

   b. Electricity: Peak Demand _____kW

7. Current Energy Use by Market:

   a. Steam:_____10^6 lb/yr

   b. Electricity:_____10^6 kWh/hr

8. Fuel Use by Market:

   a. Fuel oil: Type_____

      Amount _____ 10^6 gal/yr

      Current Price $_____/gal

NEW FACILITY TECHNICAL PROPOSAL FORM B

b. Natural gas: Amount _____10^6 mcf/yr

Current price $_____/mcf

9. Description of Existing Power Plant (steam market only):

a. Boilers: Number_____; Steam conditions_____; Output_____

b. Turbine-Generator: Number_____; Type_____

NEW FACILITY TECHNICAL PROPOSAL FORM C

REFUSE-DERIVED FUEL MARKET
(To be completed by Proposers of Prepared Fuel Sale Systems)

1. Name of RDF Market:_____

   Manufactured Products (if applicable):_____

2. Address:_____
   _____
   _____

3. Name and Address of any Parent Company:_____
   _____
   _____

4. Name and Telephone Number of Contact at Energy Market:
   _____
   _____
   _____

5. Fuel Product to be Sold:

   Refuse-Derived Fuel
   Burn Rate: _____ TPD _____ TPW _____ TPY

6. Current Energy Production by Market:

   a. Steam:_____ 10^6 lb/yr

   b. Electricity:_____ 10^6 kWh/hr

   c. Refuse-derived fuel: Amount _____ TPY

7. Current Energy Purchased by Market:

   a. Steam:_____ 10^6 lb/yr

   b. Electricity:_____ 10^6 kWh/hr

   c. Refuse-derived fuel: Amount _____ TPY
      Current Price $_____/ton

8. Fuel Use by Market:

   a. Fuel oil: Type_____

      Amount _____ 10^6 gal/yr
      Current Price $_____/gal

NEW FACILITY TECHNICAL PROPOSAL FORM C (continued)

b. Natural gas: Amount _____ 10^6 mcf/yr

Current price $_____/mcf

c. Coal Type_____

Amount _____ TPY

Current Price $_____/ton

Average HHV_____

d. Other (specify type, amount, HHV, and unit price)

_____

_____

9. Description of existing furnace/boilers where refuse-derived fuel will be cofired with fossil fuel:

a. Boilers:

Number: _____
Steam Conditions: _____
Output: _____
Manufacturer: _____
Model No.: _____
Year Installed: _____
Design heat release rate: _____

Proposer must furnish cross-section of boiler design.

b. Percent RDF to be cofired with fossil fuel (Btu basis) ___%

c. Modifications required to existing furnace/boiler system to cofire RDF:_____

_____

_____

_____

_____

d. Required RDF specifiation in order to cofire with fossil fuel:

C_____ H_____ N_____ O_____ S_____ CL_____

H_2O_____ Ash_____ HHV_____

NEW FACILITY TECHNICAL PROPOSAL FORM C (continued)

Particle Size Distribution: __% less than __ inches
__% less than __ inches
__% less than __ inches
__% less than __ inches

Discuss which components of the ultimate analysis are critical to existing boiler operation, and indicate allowable tolerance and maximum limits.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

10. Provide a discussion of the method of transporting RDF to the user's facility and of loading RDF at the facility, transporting RDF to the buyer, and unloading and storing RDF at the user's facility.

NEW FACILITY TECHNICAL PROPOSAL FORM D

BUDGETARY ESTIMATE OF OPERATING AND MAINTENANCE COSTS
(1985 $)

ELEMENT	COST ($000)	PERCENT OF TOTAL
1. Process Plant Operating Personnel		
a. Administrative and Support (No. of Employees___)	_____	_____
b. Process Plant Supervisory (No. of Employees___)	_____	_____
c. Process Plant Operating (No. of Employees___)	_____	_____
d. Process Plant Maintenance (No. of Employees___)	_____	_____
2. Utilities (as applicable)		
a. Electricity	_____	_____
b. Water	_____	_____
c. Gas	_____	_____
d. Oil	_____	_____
e. Sewer	_____	_____
f. Other	_____	_____
3. Process Plant Maintenance		
a. Supplies	_____	_____
b. Repair Parts	_____	_____
c. Other	_____	_____
4. Raw Materials	_____	_____

NEW FACILITY TECHNICAL PROPOSAL FORM E

BUDGETARY ESTIMATE OF CONSTRUCTION COST BY ELEMENT
(1985 $)

ELEMENT	COST ($000)	PERCENT OF TOTAL
1. Architectural and Engineering		
2. Management and Support Activities		
3. Site Work		
- Demolition		
- Improvements		
- Preparation		
4. Buildings (including HVAC, plumbing, etc.)		
a. Boiler Building		
b. Turbine-Generator Building		
c. Others (specify)		
5. Equipment		
a. Mobile Vehicles (in-plant use and haul)		
b. Boiler Feed Cranes		
c. Furnaces/Boilers (from boiler feed up to air pollution control equipment, including combustion air systems and ash handling systems)		
d. Turbine-Generator (including condenser)		
e. Air Pollution Control (including stacks)		
f. Feedwater (including water treatment, heaters)		
g. Cooling Tower and Recirculation Equipment		
h. In-Plant Piping (including) steam, condensate, feedwater)		
i. Instrumentation and Electrical		
j. Electricity Interconnection		

NEW FACILITY TECHNICAL PROPOSAL FORM E (continued)

ELEMENT		COST ($000)	PERCENT OF TOTAL
k.	Accessories, Compressors, Fans, etc.		
l.	Ferrous Recovery System		
m.	Salvage Value - Existing Equipment		
n.	Other Equipment (specify):		
	_____		
	_____		
	_____		
	_____		

6. Insurance During Construction:

	Type of Policy	Coverage Limits		
a.	Workman's Compensation			
b.	General Liability			
c.	Automobile Liability			
d.	Builders Risk Property			
e.	_____			
f.	_____			
g.	_____			

7.	Bond Expense During Construction		
TOTAL COST			100.

NEW FACILITY TECHNICAL PROPOSAL FORM F

EQUIPMENT DESCRIPTION

(To be completed by Proposers of New Facilities only)

1. As-Received Waste Storage Capacity: _____ tons

2. Number of Cranes for Retrieval of Waste: _____

3. Front-End Processing Lines:

   Number _____

   Maximum Throughput Capacity _____TPH

   Number of Operating Hours per Day per Line _____

   Fuel Yield _____%

   Combustible Yield _____%

   Ash Content _____%

   Particle Size Distribution for Final Fuel Product:

   __% less than __ inches
   __% less than __ inches
   __% less than __ inches
   __% less than __ inches

   HHV _____

4. Furnaces: Number _____
   Capacity _____ TPD

5. Boilers: Number _____
   Maximum steam output _____ lbs/hr
   Steam conditions at outlet _____psig; _____^{o}F

6. Air Pollution Control Description: _____
   _____
   _____

   a. ESP: Number _____
   Fields/unit _____
   CSA _____

NEW FACILITY TECHNICAL PROPOSAL FORM F (continued)

b. Baghouse: Number _____
Capacity/unit _____ acfm
Expected loadings (gr/dscf @12% CO_2): inlet _____
outlet _____

c. Scrubber: Number _____
Type _____
Re-agent _____
Acid gas removal efficiency: HCl ____
H_2SO_4 ____

7. Ash Handling System: Number _____
Type _____

8. Boiler Feed Pumps: Number _____
Capacity (each) _____ lbs/hr

9. Deaerator: Number _____
Capacity _____ lbs/hr
Operating pressure _____ psig

10. Steam Transmission Line: Overall length _____ ft
Pipe size/schedule _____

11. Type of Water Treatment System: _____
_____
_____

12. Stack Description: Number _____
Height: _____

13. Stack Emissions (TPY at maximum capacity of ___ TPD):

Criteria Pollutants	Uncontrolled	Controlled
Particulates	_____	_____
SO_2	_____	_____
NO_x	_____	_____
CO	_____	_____
Total Hydrocarbons	_____	_____
Lead	_____	_____

NEW FACILITY TECHNICAL PROPOSAL FORM F (continued)

14. Quantify Fugitive Emissions from Material Transport, Handling, and Storage: _____ TPY Uncontrolled
_____ TPY Controlled

15. Size Reduction Equipment:

a. Number: _____
b. Type: _____
c. Maximum capacity (TPH): _____
d. Guaranteed particle size production gradation:
__% less than __ inches
__% less than __ inches
__% less than __ inches
__% less than __ inches

16. Air Classifiers:

a. Number: _____
b. Blower:

- Type: _____
- Capacity (scfm) _____

c. Design capacity (TPH): _____
d. Fractional split:

- Light fraction (%): _____
- Heavy fraction (%): _____

17. Screens/Trommels:

a. Number: _____
b. Type: _____
c. Application: _____
_____
_____
_____
_____

d. Maximum throughput (TPH): _____
e. Overall dimensions:

- Section 1: _____
- Section 2: _____

NEW FACILITY TECHNICAL PROPOSAL FORM F (continued)

f. Screen hole size:

- Section 1: _____
- Section 2: _____

g. RPM: _____

18. Furnace Feed Surge and Feed System

a. Number of feeders per furnace: _____
b. Number of feeders operating at:

- Furnace's maximum continuous rating (TPH): _____
- Furnaces's lowest continuous rating (TPH): _____

c. Type: _____
d. Capacity (tons): _____
e. Volume (ft^3) _____
f. Discharge rate (TPH): _____
g. Description of outfeed and metering: _____

_____

_____

_____

_____

19. Mechanical Conveyors (complete for each type):

a. Material handled:	_____	_____	_____	_____
b. Belt speed (fpm):	_____	_____	_____	_____
c. Belt type:	_____	_____	_____	_____
d. Belt width:	_____	_____	_____	_____
e. Capacity (TPH):	_____	_____	_____	_____
f. Troughing angle:	_____	_____	_____	_____
g. Maximum incline (^{0}):	_____	_____	_____	_____

NEW FACILITY TECHNICAL PROPOSAL FORM F (continued)

20. Pneumatic Conveyors (complete for each type)

a. Material handled: _____
b. Duct size (in): _____
c. Duct material: _____
d. Duct wall thickness: _____
e. Are wearback elbows used: Yes _____ No _____

f. Velocity (fpm): _____
g. Type of rotary airlocks: _____
_____

h. Description of blower: _____
_____
_____

i. Description of pertinent design features: _____
_____
_____
_____
_____

21. Fan Conveyors (complete for each type)

a. Material handled: _____
b. Speed (fpm): _____
c. Construction materials: _____
_____

d. Maximum incline (^{o}): _____

22. Pelletizers

a. Number: _____
b. Type: _____
c. Maximum capacity (TPH): _____
d. Number operating: _____
e. Number spares: _____

NEW FACILITY TECHNICAL PROPOSAL FORM G

AVAILABILITY DATA SHEETS
BOILERS/FURNACES

Boiler No./Furnace No.:	_____	_____	_____	_____
Hours Scheduled Outage:				
January	_____	_____	_____	_____
February	_____	_____	_____	_____
March	_____	_____	_____	_____
April	_____	_____	_____	_____
May	_____	_____	_____	_____
June	_____	_____	_____	_____
July	_____	_____	_____	_____
August	_____	_____	_____	_____
September	_____	_____	_____	_____
October	_____	_____	_____	_____
November	_____	_____	_____	_____
December	_____	_____	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____	_____	_____
TOTAL	8,760 hrs	8,760 hrs	8,760 hrs	8,760 hrs

NEW FACILITY TECHNICAL PROPOSAL FORM H

AVAILABILITY DATA SHEET
TURBINE-GENERATOR SET (if applicable)

	YEARS WITHOUT INSURANCE OUTAGE	YEARS WITH INSURANCE OUTAGE*
Hours Scheduled Outage:	_____	_____
January	_____	_____
February	_____	_____
March	_____	_____
April	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
August	_____	_____
September	_____	_____
October	_____	_____
November	_____	_____
December	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____
TOTAL	8,760 hrs	8,760 hrs

* Provide attachment that identifies anticipated years in which insurance outage would occur.

NEW FACILITY TECHNICAL PROPOSAL FORM I

AVAILABILITY DATA SHEET
FRONT-END PROCESSING LINES (if applicable)

Front-End Line No.:	_____	_____
Hours Scheduled Outage:		
January	_____	_____
February	_____	_____
March	_____	_____
April	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
August	_____	_____
September	_____	_____
October	_____	_____
November	_____	_____
December	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____
TOTAL	8,760 hrs	8,760 hrs

3.5.3 EXISTING FACILITY(IES)

3.5.3.1 General

The Technical Proposal must contain sufficient detail and historical operating data, if available, to describe the technical design and define the actual operation of the Existing Facility(ies).

The Existing Facility(ies) component of the Technical Proposal will be prepared and submitted in accordance with the following outline. Instructions for preparing each section of the Existing Facility(ies) component of the Technical Proposal shown in the outline are given in the following subsections. Proposers will provide the information as requested and as applicable to each (if more than one) of their proposed Facility(ies).

The Proposer may, at his option, submit complete copies of the Approved Application for DEQE pursuant to 3.10 CMR 7.02. It is expected that the permit filed will meet most of the requirements below, however, at a minimum, the Approved Application must contain the informaion requested in subsections 3.5.3.2 (Narrative Descriptions) and 3.5.3.3 (Diagrams).

All Proposers must complete Existing Facility Technical Proposal Forms A through E, as applicable.

3.5.3.2 Narrative Descriptions

1. Existing Facility Information. The Proposer of an existing Facility will provide all the data requested on Existing Facility Technical Proposal Form A.

2. Energy Market Information. The Proposer will specify which energy market option it has selected. The Propoesr will then supplement Existing Facility Technical Proposal Form B with a discussion of how the existing Facility will meet the energy user's contractually stipulated peformance requirements, and the expected production levels for steam and/or electricity. In addition, the operating relationship between the Facility and the energy user's plant must be described.

3. General Faciltiy Design and Operation. The Proposer must discuss the design and operation of the Existing Facility. The Proposer must describe the equipment being used, stating size, capacity, and other pertinent design data necessary to convey a clear description of the Facility. This discussion will refer to the simplified facility diagram [see subsection 3.5.3.3(1)],

state how various components are operated, and describe how operation and control is integrated for the entire Facility. Historical operating data, if available, shall be provided to verify:

- Adequacy of receiving, storage, preparation (if applicable), and furnace feed systems.
- Adequacy of combustion control system and burnout.
- Adequacy of pressure and temperature control to the user and/or turbine-generator.
- Ability to sustain high furnace/boiler efficiencies.
- Ability to comply with emission regulations.
- Ability to maintain personnel safety.

4. Operating and Management Approach. The Proposer will discuss the operating and management approach used during operations. The Existing Facility component of the Technical Proposal must also include an organization chart (as above), as well as the Proposer's accounting procedures for monitoring and recording the waste stream into the Facility; unprocessed waste and residue streams out of the Facility; steam and/or electricity sold to the energy users; and any recovered materials sold.

5. Maintenance Program Approach. The Proposer will discuss the plan and procedures for all routine and long-term maintenance of Facility equipment.

6. Environmental Permit. The Proposer will provide proof that it currently has and is in compliance with all environmental permits and regulations applicable to its operation. The proof shall consist of copies of applicable permits and the results of tests used to determine compliance.

7. Availability Analysis. The Proposer will complete the availability data sheets for the boilers/furnaces and, if applicable, for the front-end processing lines and the turbine-generator set (see Existing Facility Technical Proposal Forms C through E). The Proposer will discuss the methodology and basis used to prepare the availability data sheets. In this discussion, reference to the operating plant data of the Existing Facility must be provided, if available. The Proposer will also provide the actual forced and scheduled outage rate for 1984 and 1983, as requested on Existing Facility Technical Proposal Form A, if available.

8. On-Site Traffic Handling. The Proposer will discuss its procedures for handling vehicle traffic within the site as well as on the tipping floor, and for assuring that City delivery vehicles will have ready access. Sufficient detail must be supplied by Proposers who have elected not to include a Transfer Station(s) as part of their offering to assure the City that its vehicles will have ready access at the Facility and that the Facility can handle any increased traffic.

   The Proposer will state the total time required (in minutes) for an incoming vehicle to enter the queing line, unload onto the floor or into the pit, and exit. The time can be expressed as a range or as a maximum or minimum. Actual operating data, if available, shall be used to arrive at this turnaround time and will be provided. The discussion will confirm that sufficient tipping bays are provided to support the Proposer's stated vehicle traffic and turnaround time.

9. Waste Storage Capacity Analysis. The Proposer will discuss the Facility's waste storage capacity and indicate the minimum amount of storage to be provided. Actual operating data should be used in the analysis, if available. All assumptions (e.g., pile height and density) used to develop the indicated storage capacity and actual operating data must be provided.

10. Prepared-Fuel Storage Capacity Analysis (if proposed). The Proposer will discuss the Facility's prepared-fuel storage capacity and indicate the minimum capacity provided. Actual operating data shall be used in this analysis, if available. All assumptions and actual operating data used to develop the storage capacity must be provided.

11. Residue Storage Capacity Analysis. The Proposer will describe the residue storage system. Operating data used to determine the amount of residue storage must be provided, if available.

12. Waste Transfer Capability. If the Existing Facility is a Point of Delivery, the Proposer will discuss the methods by which the Facility will provide for the transfer of waste from the Facility during periods of prolonged plant shutdown in order to assure disposal of City Waste 52 weeks per year.

3.5.3.3 Diagrams

1. Simplified Facility Diagram. The Proposer will submit a simplified facility diagram showing all of the functions included in the conversion of waste to energy. The diagram must also indicate major process control elements.

2. Mass Flow Diagram. The mass flow diagram must be provided to account for all mass entering and leaving the waste processing system, the steam generating system, and the electricity generating and auxiliary systems (if applicable). The diagram will be presented to show clearly the individual mass flow streams through the systems in lbs/hr hour (except for generator outputs, which will be given in kW). At a minimum, the following streams must be accounted for:

- Inputs:
  - Waste
  - Prepared fuel (if applicable)
  - Fossil fuel (if any)
  - Combustion air (at 80^{o}F)
  - Chemicals for water treatment.

- Outputs:
  - Unburned combustibles in residue
  - Processing rejects (if applicable)
  - Bottom ash (dry and wet)
  - Fly ash
  - Emitted particulate
  - Flue gas
  - Process wastewater
  - Steam
  - Electricity (if applicable)
  - Recovered materials (if applicable).

The flow diagram will indicate inputs and outputs based on both the rated capacity of the Facility and the average daily throughput.

If an extraction-condensing turbine-generator is proposed where steam is extracted for sale, the mass flow around the turbine-generator must indicate for the same boiler outlet the following two cases:

1. Maximum auto-extraction steam flow to the steam user and minimum condenser flow (lb/hr).

2. Zero auto-extraction steam flow to the steam user and maximum condenser flow (lb/hr).

Generator outputs for each case will be given in kW and will indicate gross electricity production, electricity used in-house, and electricity sold to the electricity user.

The mass flow diagram must be accompanied by sufficient calculations, actual operating data, analytic assumptions, and clearly identified engineering assumptions to permit verification of the Proposer's claim of system performance.

3.5.3.4 Technical Proposal Forms

The Proposer must submit Existing Facility Technical Forms A through E.

III. OUTLINE FOR EXISTING FACILITY COMPONENT OF TECHNICAL PROPOSAL VOLUME

A.* Narrative Descriptions (as applicable)

1. Energy Market Information
2. General Facility Design and Operation
3. Operating and Management Approach
4. Maintenance Program Approach
5. Maintenance Program Approach
6. Environmental Permits
7. Availability Analysis
8. On-Site Traffic Handling
9. Waste Storage Capacity Analysis
10. Prepared-Fuel Storage Capacity Analysis
11. Residue Storage Capacity Analysis
12. Waste Transfer Capability
13. Backup Landfill

B.* Diagrams, Drawings, and Schedule (as applicable)

1. Simplified Facility Diagram
2. Mass Flow Diagram

C.* Data Forms (as applicable)

1. Existing Facility Technical Proposal Form A
2. Existing Facility Technical Proposal Form B
3. Existing Facility Technical Proposal Form C
4. Existing Facility Technical Proposal Form D
5. Existing Facility Technical Proposal Form E

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* Proposer may substitute copies of the Approved Application to DEQE for A and B. Refer to subsection 3.4.2.2 (Organization of the Technical Proposal) for detailed instructions.

EXISTING FACILITY TECHNICAL PROPOSAL FORM A

If more than one Facility is provided, information is to be provided for each Facility using separate copies of this form.

1. Name of Facility: _____

2. Owner/Operator's Name and Address:

   _____
   _____
   _____
   _____
   _____

3. Location of Facility:

   _____
   _____

4. Rated Capacity of Facility: _____ TPD

5. Energy Product Produced: _____

6. Energy User's Name and Address:

   _____
   _____
   _____
   _____

7. Plant Capacity Committed to Others (list each waste supplier):

   Waste Supplier _____
   Annual Tonnage Contracted for _____
   Contract Termination Date _____

   Waste Supplier _____
   Annual Tonnage Contracted for _____
   Contract Termination Date _____

   Waste Supplier _____
   Annual Tonnage Contracted for _____
   Contract Termination Date _____

EXISTING FACILITY TECHNICAL PROPOSAL FORM A (continued)

Waste Supplier_____
Annual Tonnage Contracted for_____
Contract Termination Date_____

Waste Supplier_____
Annual Tonnage Contracted for_____
Contract Termination Date_____

Waste Supplier_____
Annual Tonnage Contracted for_____
Contract Termination Date_____

8. Plant Capacity Available to commit to City Waste: _____

9. Route and Travel Time from the City (Transfer Station if provided) to Facility:_____
_____

10. Date of Commercial Operation: _____

11. Residue Generation Rate (lb/lb waste processed waste): _____% H_2O _____

12. Energy Product for Sale (net of any in-plant usage):

Steam lbs/ton) _____ @ _____psig, _____^{o}F

Condensate Return Yes ___ No ___ _____% @ _____^{o}F

Electricity _____ kW/ton

13. Annual Tons of Waste Processed: _____ 1984 _____ 1983

14. Plant Forced Outage Rate:_____ 1984 _____ 1983

15. Plant Scheduled Outage Rate: _____ 1984 _____ 1983

16. Annual Quantity of Unprocessed Waste Bypassed to Landfill: _____ 1984 _____ 1983

EXISTING FACILITY TECHNICAL PROPOSAL FORM B

ENERGY MARKET

1. Name of Energy Market: _____

   Manufactured Products (if applicable): _____

2. Address: _____
   _____
   _____

3. Name and Address of any Parent Company: _____
   _____
   _____

4. Name and Telephone Number of Contact at Energy Market:
   _____
   _____
   _____

5. Energy Product(s) to be Sold:

   a. Steam: Quantity: avg. _____lbs/hr; peak _____lbs/hr;
      minimum _____lbs/hr

      Conditions: _____psig; _____^{o}F

   b. Electricity: Peak Demand _____kW

6. Current Energy Use by Market:

   a. Steam: _____ 10^6 lb/yr

   b. Electricity: _____ 10^6 kWh/yr

7. Fuel Use by Market:

   a. Fuel oil: Type _____

      Amount _____ 10^6 gal/yr

      Current Price $_____/gal

   b. Natural gas: Amount _____ 10^6 mcf/yr

      Current price $_____/mcf

EXISTING TECHNICAL TECHNICAL PROPOSAL FORM B (continued)

8. Description of Existing Power Plant:

   a. Boilers: Number _____; Steam conditions _____; Output _____

   b. Turbine-Generator: Number _____; Type _____

EXISTING FACILITY TECHNICAL PROPOSAL FORM C

AVAILABILITY DATA SHEETS
BOILERS/FURNACES

Boiler No./Furnace No.:	_____	_____	_____	_____
Hours Scheduled Outage:				
January	_____	_____	_____	_____
February	_____	_____	_____	_____
March	_____	_____	_____	_____
April	_____	_____	_____	_____
May	_____	_____	_____	_____
June	_____	_____	_____	_____
July	_____	_____	_____	_____
August	_____	_____	_____	_____
September	_____	_____	_____	_____
October	_____	_____	_____	_____
November	_____	_____	_____	_____
December	_____	_____	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____	_____	_____
TOTAL	8,760 hrs	8,760 hrs	8,760 hrs	8,760 hrs

EXISTING FACILITY TECHNICAL PROPOSAL FORM D

AVAILABILITY DATA SHEET
TURBINE-GENERATOR SET (if applicable)

	YEARS WITHOUT INSURANCE OUTAGE	YEARS WITH INSURANCE OUTAGE*
Hours Scheduled Outage:	_____	_____
January	_____	_____
February	_____	_____
March	_____	_____
April	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
August	_____	_____
September	_____	_____
October	_____	_____
November	_____	_____
December	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____
TOTAL	8,760 hrs	8,760 hrs

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* Provide attachment that identifies anticipated years in which insurance outage would occur.

EXISTING FACILITY TECHNICAL PROPOSAL FORM E

AVAILABILITY DATA SHEET
FRONT-END PROCESSING LINES (if applicable)

Front-End Line No.:	_____	_____
Hours Scheduled Outage:		
January	_____	_____
February	_____	_____
March	_____	_____
April	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
August	_____	_____
September	_____	_____
October	_____	_____
November	_____	_____
December	_____	_____
TOTAL ANNUAL HOURS SCHEDULED OUTAGE	_____	_____
TOTAL ANNUAL HOURS NONSCHEDULED OUTAGE	_____	_____
TOTAL HOURS ANNUAL OPERATIONS	_____	_____
TOTAL	8,760 hrs	8,760 hrs

3.5.4 TRANSFER STATION(S)

Proposers electing to include a Transfer Station(s) in their System must complete this section.

3.5.4.1 General

The Technical Proposal must contain sufficient detail to describe the design and operation of the Transfer Station(s). The Transfer Station(s) component of the Technical Proposal will include narrative descriptions, engineering drawings, and completed data forms, and will be prepared according to the following outline.

3.5.4.2 Narrative Descriptions

1. Site Information. The Proposer must discuss site zoning and surrounding land uses.

2. General Design and Operation. The Proposer must discuss the design and operation of the waste receiving, handling, and processing equipment.

3. Operating Plan. The Proposer must describe the methods of receiving and handling of waste at the Transfer Station(s).

4. Maintenance Plan. The Proposer will discuss the plan and procedures for all routine maintenance of equipment at the Transfer Station(s).

5. On-Site Traffic Handling. The Proposer will discuss its procedures for handling vehicle traffic within the site as well as on the tipping floor. Sufficient detail must be supplied by Proposers to assure the City that its vehicles will have ready access at the Transfer Station(s) and that the Transfer Station(s) can handle any increased traffic.

   The Proposer will state the total time (in minutes) for an incoming vehicle to enter the queing line, unload, and exit.

6. Waste Hauling Plan. The Proposer must describe the number and types of vehicles used to transfer waste to the Facility(ies) and/or Landfill(s). The schedule for hauling will be included.

7. Personnel. The Proposer must document the number and function of operating, supervisory, and maintenance personnel. The Proposer must identify the use of contract labor, including description of duties and responsibilities.

3.5.4.3. Drawings and Schedule

1. Site Plot Plan. The Proposer must provide a site plot plan for the Transfer Station(s) depicting roadways, buildings, and property lines.

2. Equipment General Arrangements and Elevations. The Proposer must provide general arrangements and elevations for the Transfer Station(s) showing location of scales, receiving area, and processing equipment.

3. Architectural Treatment. The Proposer must submit an architectural rendering showing the relationship of the Transfer Station(s) to the surrounding environment.

4. Schedule. The Proposer must submit a schedule for the Transfer Station(s) from design through Scheduled Service Date.

3.5.4.4 Technical Proposal Forms

The Proposer must complete Transfer Station Technical Proposal Forms A, B, and C.

IV. OUTLINE FOR TRANSFER STATION COMPONENT OF TECHNICAL PROPOSAL VOLUME

A. Narrative Descriptions

1. Site Information
2. General Facility Design and Operation
3. Operating Plan
4. Maintenance Plan
5. On-Site Traffic Handling
6. Waste Hauling Plan
7. Personnel

B. Drawings

1. Site Plot Plan
2. Equipment General Arrangements and Elevations
3. Architectural Treatment
4. Schedule

C. Data Forms

1. Transfer Station Technical Proposal Form A
2. Transfer Station Technical Proposal Form B
3. Transfer Station Technical Proposal Form C

TRANSFER STATION TECHNICAL PROPOSAL FORM A*

1. Current Owner:_____

2. Address:_____

3. Location:_____
_____

4. Area Available for Transfer Station:_____sq ft

5. Maximum throughput capacity: _____TPY

6. Maximum storage capacity: _____Tons

7. Current Zoning:_____
_____

8. Is site in a designated wetlands, coastal zone, or another specifically designated area?_____
_____

9. Have borings and soils investigation been conducted? Yes___ No ___

10. Has a site assignment been obtained? Yes___ No ___

11. Has DEQE approved the construction and/or operation of the transfer station? Yes ___ No ___

12. If the answer to number 8 is yes, a copy of the site assignment must be included. Otherwise, provide a detailed discussion on how the site assignment will be obtained.

13. If the answer to number 9 is yes, a copy of the DEQE approval and/or letter of compliance must be included. Otherwise, provide a detailed discussion on how DEQE approval will be obtained.

_____

* Results of technical evaluations and engineering reports must also be provided.

TRANSFER STATION TECHNICAL PROPOSAL FORM B

ESTIMATED ANNUAL OPERATING AND MAINTENANCE COST (1985 $)
(To be completed for each Transfer Station)

Transfer Station Location _____

Estimated TPY_____

Transfer Station Operations and Maintenance (Labor Costs):

- Operating $_____
- Supervisory _____
- Maintenance _____
- Administrative _____

Waste Transportation Operations and Maintenance (Labor Costs):

• Operating	$_____*	_____**
• Supervisory	_____	_____
• Maintenance (direct labor)	_____	_____
• Administrative	_____	_____

Transfer Station Operation and Maintenance (Other Costs):

- Spare Parts $_____
- Service (Equipment) _____
- Fuel _____
- Utilities _____
- Security _____
- Supplies _____
- Subcontracts _____

_____

* For waste delivered to the waste-to-energy Facility.

** For waste not delivered to the Facility that is transported to the designated landfill.

TRANSFER STATION TECHNICAL PROPOSAL FORM B (continued)

Waste Transportation Operations and Maintenance (Other Costs):

• Service	$_____*	_____**
• Fuel	_____	_____
• Supplies	_____	_____
• Spare Parts	_____	_____
• Tolls	_____	_____
• Maintenance Contracts	_____	_____
• Landfill Disposal	N/A	_____
TOTAL O&M Cost	$_____*	$_____**

_____

* For waste delivered to the waste-to-energy Facility.

** For waste not delivered to the Facility that is transported to the designated landfill.

TRANSFER STATION TECHNICAL PROPOSAL FORM C

ESTIMATE OF CONSTRUCTION COST BY ELEMENT (1985 $)

ELEMENT	COST ($000)	PERCENT OF TOTAL
1. Engineering		
2. Management and Support Activities		
3. Site Work		
- Demolition		
- Improvements		
- Preparation		
4. Buildings (including HVAC, plumbing, etc.)		
a. Receiving and Handling Building		
b. Administration Building		
5. Equipment		
a. Mobile Vehicles (in-plant use and haul		
b. Compactors		
c. Conveyors		
d. Miscellaneous Processing Equipment		
_____		
_____		
_____		
_____		
TOTAL COST	$_____	100.

3.5.5 LANDFILL

All Proposers must complete this section.

3.5.5.1 General

The Technical Proposal must contain sufficient detail to describe the design and operation of the Landfill(s). The Landfill(s) component of the Technical Proposal will include narrative descriptions, drawings, and completed data forms, and will be prepared according to the following outline.

3.5.5.2 Narrative Descriptions

1. Site Information. The Proposer must discuss site zoning and surrounding land use.

2. Operating Plan. The Proposer must describe the methods for waste receiving, disposal, and cover at the Landfill(s). The Proposer must document the annual quantity of residue and unprocessed waste from the City and other contract communities to be disposed of at the Landfill(s) over the term of the Service Agreement.

3. Maintenance Plan. The Proposer will discuss plans and schedule for routine maintenance of equipment at the Landfill(s).

4. Facilities and Equipment. The Proposer will describe all facilities and equipment to be provided at the Landfill(s). The Proposer will describe any measures for prevention of groundwater contamination, including groundwater monitoring, leachate collection, holding ponds, and treatment facilities.

5. On-Site Traffic Handling. The Proposer will discuss its procedures for handling vehicle traffic within the site. Sufficient detail must be supplied by Proposers to assure the City that its vehicles will have ready access at the Landfill(s) and that the Landfill(s) can handle any increased traffic.

   The Proposer will state the total time (in minutes) for an incoming vehicle to enter the queing line, unload, and exit.

6. Personnel. The Proposer will document the number and function of operating, supervisory, and maintenance personnel. The Proposer will identify contract labor, including description of duties and responsibilities.

3.5.5.3 Drawings

1. Site Plot Plan. The Proposer must provide a site plot plan, depicting roadways, buildings, dedicated landfill, leachate system, and property lines.

2. Site Utilization Plan. The Proposer must submit a site utilization plan indicating that portion of the original permitted capacity that has been utilized and the portion remaining for City Waste and other firm contract from other suppliers.

3.5.5.4 Technical Proposal Forms

The Proposer must complete Landfill Technical Proposal Form A.

V. OUTLINE FOR LANDFILL COMPONENT OF TECHNICAL PROPOSAL VOLUME

A. Narrative Descriptions

1. Site Information
2. Operating Plan
3. Maintenance Plan
4. Facility and Equipment
5. On-Site Traffic Handling
6. Personnel

B. Drawings and Schedule

1. Site Plot Plan
2. Site Utilization Plan
3. Schedule

C. Data Forms

1. Landfill Technical Proposal Form A

LANDFILL TECHNICAL PROPOSAL FORM A

LANDFILL CAPACITY INFORMATION

If more than one Landfill is required to provide sufficient landfill capacity for the Facility, information must be provided for each Landfill, using separate copies of this form.

- New or Existing Landfill — Yes ___ No ___

If new, a copy of the site assignment must be provided.

1. Name of Landfill:

_____
_____

2. Owner/Operator's Name and Address:

_____
_____
_____
_____
_____

3. Location of Landfill:

_____
_____
_____

4. Area:

- o Total acreage owned, optioned, or contracted _____
- o Acreage currently permitted by State _____
- o Acreage remaining on current permit _____

5. Capacity (tonnage, volume, or average depth):

- o Total capacity optioned or contracted (yd^3) _____
- o Total tonnage _____
- o Maximum Depth (ft) _____

6. Current zoning: _____

7. Site assignment (include copy of site assignment) _____

LANDFILL TECHNICAL PROPOSAL FORM A (continued)

8. State Permit (include copy of permit or permit application and copy of latest State inspection report)._____

_____

9. Assumed annual quantity of residue and unprocessed waste generated by City-supplied waste:

_____ yd^3

_____ Tons (moisture included)

10. Maximum total annual quantity of residue and unprocessed waste generated by the Facility:

_____ yd^3

_____ Tons (moisture included)

11. Which waste types are currently accepted; which are excluded?

_____

12. Suggested route and travel time from the waste-to-energy Facility to the landfill:

_____

13. A letter of intent from the landfill owner/operator has been provided as part of our Business Proposal.

_____
Current Landfill or Property Owner/Operator:

_____
Type Name

_____
Date